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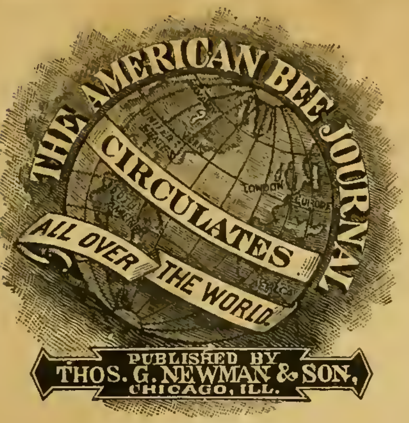


THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Jan. 4, 1890. No. 1.

Moan on, ye cold and winter winds,
  Against the frosted window-panes ;
Ye cannot change the love that binds,
  With strong and fervent chains,
The heart that beats and never wanes.

Lash in your might the aged tree,
  Spare not his form, though bending low,
Nor let a leaf there clinging be ;
But blow, ye winds, and blow,
Ye cannot change the heart in me.

—*Arthur's Home Magazine.*

◆

Twenty-Five Years—a quarter of a century—is now completed by the AMERICAN BEE JOURNAL. This issue begins a new quarter of a century of its history. Its character and usefulness in the past is its guaranty for the future. We have no time to moralize over the situation—but will work for the interests of bee-keepers in the future, as we have done 16 years, since the BEE JOURNAL came into our hands. We ask all to work with us, for the best interests of the pursuit.

◆

For the Many expressions of gratitude for the work done by the General Manager of the National Bee-Keepers' Union, during the past four years, all will please take this acknowledgement. Though time is too limited to answer each one privately, he appreciates all the "kind words" exceedingly.

Mr. G. H. Ashby, of Albion, N. Y., puts his thoughts into these vigorous words:

> A person would be considered very mean that would require another to work for his direct interest without compensation; but that is just what bee-keepers (who are not members of the Union) are doing. Why not all join hands, for mutual protection, and cause our enemies to cower by actual force of numbers? The stronger we become, the less suits we will have to defend. Now, brother bee-keepers, come to the front with your *great influence* and a *little money*, and let us all have an equal interest in the good work.

The Way to Do It.—The *City News*, New Castle, Pa., copied a lying article about comb honey from the Philadelphia *Record*, which has been repeatedly refuted, but the latter paper, though often supplied with marked copies with refutations of its falsehood, has never had the honesty to retract a word of it. (See page 436 of last year's BEE JOURNAL.)

Mr. T. S. Sanford wrote a reply, but the *City News* could not find room for it. He took it to the *Courant*, an opposition paper, and there it found a place. Mr. Sanford told the readers about the origin of the falsehood; and stated that Bro. Root's offer of $1,000 for proof of the existence of the factory where artificial comb honey is manufactured, is still good. He then adds:

> The fact that he has never had an application for the money is good proof that there is no such thing. There may be dishonest bee-keepers as well as dishonest people in other trades and callings. but it is a fact that bee-keepers as a class, will compare favorably for honesty with our best citizens. It is a shame to injure their calling by publishing such articles as the one referred to. A paper that can find room to publish a falsehood, but cannot find room to publish the truth regarding the matter, in my opinion, has very little principle.

That is a good way to correct, as far as possible, such stories. Let each bee-keeper who sees such things published, write a contradiction, and send it to the paper where the falsehood appeared. Keep a copy of it, and if that paper will not publish it, another one will, and thus the truth may be served.

◆

To Affiliate with the International is just the thing for all local associations to do. Some have written us to state how it should be done. We will reply to all through the BEE JOURNAL, our time being too much occupied to reply to each separately. Just introduce a resolution to affiliate with the International Society, and have it carried—then vote that the Treasurer send $5.00 (the fee) to the Secretary of the International (C. P. Dadant, Hamilton, Hancock Co., Ills.,) and he will so record it, and send receipt for the same.

◆

☞ The Purdue University, La Fayette, Ind., School of Agriculture, will hold a special winter course in Agriculture and Related Sciences, including lectures in Agriculture, Horticulture, Veterinary Science, Agricultural Chemistry, Zoology, Botany, Economic Entomology and Farm Law, commencing Tuesday, Jan. 16, 1890, and continuing six weeks.

◆

Gleanings for 1889 winds up with a flourish. The number for Dec. 15 contains a Picture Gallery consisting of 16 pages filled with views of apiaries. *Gleanings in Bee-Culture* is always fresh, lively, original and interesting, and well deserves its great success.

The Union.—The dues and votes from the members of the National Bee Keepers' Union have been coming in quite lively lately, and the following from Mr. Wm. Muth-Rasmussen, of Independence, Calif., is a fair sample of the letters accompanying the votes:

> FRIEND NEWMAN:—I herewith return the voting blank of the Bee-Keepers' Union. I see no reason for the change of officers, and as long as they are not weary of well-doing, I am content to keep the old Board. Please accept my personal thanks for your efforts in behalf of the Union. If bee-keepers were less apathetic, we might give the Manager something more substantial than mere "Thanks" for his time and trouble.
>
> WM. MUTH-RASMUSSEN.

It is quite evident that there will be no change in the officers when the votes are counted. So we must prepare for another year's active warfare, and hope at the end of 1890 to make as good a showing in the Annual Report as the one just made. "Defense" is our *watchword*, and "Victory" our *motto!*

◆

The First Vice-President of the International, Mr. Eugene Secor, is receiving congratulations at home and elsewhere. The Winnebago *Summit*, of Dec. 19, 1889, contains this complimentary notice:

> Mr. Eugene Secor was elected First Vice-President of the International Bee-Keepers' Asssociation, the annual meeting of which was held at Brantford, Ont., Dec. 4 to 6. Mr. Secor has had large experience in bee-keeping, and has written many articles on this subject, and is regarded as an authority on this question. He also had the honor of having one of his Songs set to music expressly for this occasion, and which was sung at this meeting. Mr. Secor as a bee-keeper, horticulturist, farmer, and writer, is winning for himself an enviable reputation, which, as a matter of course, is highly complimentary to him, no less than gratifying to his friends.

◆

Father Langstroth has not improved in health since last we mentioned the matter, we are sorry to learn by a letter just received from his daughter, Mrs. Cowan. About eighteen months ago a subscription to insure an Annuity for him was started, and we subscribed $25.00 per annum; others pledged similar amounts, but we are pained to learn, after enquiry, that quite a number have failed to send the amounts they have pledged. Where it cannot be afforded from a limited income, we have nothing to say—but where plenty abounds, we hope that no negligence will prevent the Annuity from being kept up. Father L. needs it, in his infirmity and advanced age—and we would urge those who have abundance, to share with him—and thereby entitle them to reap the rich rewards which such "good deeds" ensure.

◆

The Last Volume ended with Query No. 676. Just think of the vast amount of information afforded in that number of Questions, and twelve thousand answers! It pays to take and read a good bee-paper.

GLEAMS OF NEWS.

Bees' Christmas.—The weather has been warm, and the sun has shone out strongly between the showers, so that the bees have been able to fly quite frequently. The winter cannot be a long one now, being cut short at one end. The following letter from Mr. Youngman shows how the bees spent Christmas in his apiary:

LAKEVIEW, Mich., Dec. 25, 1889.

It being quite warm to-day, and the sun shining, the bees had a *merry Christmas.* There has been no cold weather, and very little snow up to date, and it will be a short winter for the bees, and if they are well provided with stores, one may almost insure their wintering well. Bees went into winter quarters rather light in stores, as the honey crop was lighter than usual, the stores being almost bare of comb honey.

Last season was the most remarkable for swarming ever known here. Bees absconded to the woods in great numbers. A great many trees were found and cut. Some were found in logs and hollow roots. I have 3 swarms taken from as many trees, all at one time. S. J. YOUNGMAN.

Exposition at Vienna in 1890.—An Agricultural Exhibition is to be held in Vienna from May to November, 1890, under the auspices of the Imperial Royal Agricultural Society of Vienna.

The object of this exhibition is to give as complete a representation as possible of the actual condition of the Agriculture, Forestry, Horticulture, Gardening, Bee-Culture and Irrigation, and to promote and diffuse a knowledge of the latest inventions and discoveries relating to those subjects.

A large number of important premiums in money as well as in medals, is assured the firms of the various industrial circles, which may spur them to do their best in the coming contest.

Some Astonishing Figures.—The firm of Chas. Dadant & Son report having made and sold 59,551 pounds of comb foundation during the season of 1889. Of this, 34,498 pounds was brood foundation, and 25,053 pounds surplus foundation.

The 34,498 pounds of brood foundation could fill 210,520 Langstroth brood frames, or 21,052 ten-frame Langstroth hives; and if only one-inch strips had been used, there would have been enough to make guides for 168,416 hives. This number of sheets, 8x16½ inches, if piled on top of one another, would make a pile 2,924 feet high, or nearly three times the height of the Eiffel tower. If placed at the end of one another, they would make a line nearly 55 miles in length.

The 25,053 pounds of "thin" and "extra thin" foundation would fill 2,605,512 sections 4¼x4¼ inches. This will give an idea of the extent of the production of comb honey in the United States, for most for this comb foundation has been sold in this country, and the greater part of it has undoubtedly been used the present year. Let it be remembered that, although this firm are the largest manufacturers of comb foundation in the world, they are by no means alone, and outside of a number of other manufacturers, there are hundreds of bee-keepers who make their own comb foundation, even if their number is more limited than it was at first.

This 25,053 pounds, if cut into sheets the right size for 4¼ sections, and the sheets piled upon one another, would make a pile 16,702 feet high, or over three miles; or if placed at the end of one another, they would make a line of beeswax 154 miles in length.

The Officers and Honorary members of the International for the present year are as follows:

President—R. L. Taylor, Lapeer, Mich.
First Vice-Pres.—Eugene Secor, Forest City, Iowa.
Secretary—C. P. Dadant, Hamilton, Ills.
Treasurer—Dr. C. C. Miller, Marengo, Ills.

VICE-PRESIDENTS.

J. B. Hall, Woodstock, Ont.
O. L. Hershiser, Buffalo, N. Y.
E. R. Root, Medina, O.
Prof. A. J. Cook, Lansing, Mich.
Mrs. L. Harrison, Peoria, Ills.

ADDITIONAL NAMES OF MEMBERS.

E. L. Goold, Brantford, Ont.
W. H. Shapley, Brantford, Ont.
S. T. Pettit, Belmont, Ont.

HONORARY MEMBERS.

*F. W. Vogel, Lekmanshofel, Prussia.
Rev. George Kleine, Luethorst, Prussia.
*Andreas Schmidt, Eichstadt, Bavaria.
Rev. John Dzierzon, Karlsmarkt, Silesia.
*Baron A. Von Berlepsch, Munich, Bavaria.
Baroness L. Von Berlepsch, Munich, Bavaria.
*Prof. C. T. E. Von Siebold, Munich, Bavaria.
*Major F. Von Hruschka, Dolo, Italy.
Dr. A. Dubini, Milan, Italy.
Visconte De Saliceto, Milan, Italy.
Rev. L. L. Langstroth, Oxford, O.
*Samuel Wagner, Washington, D. C.
*M. Quinby, St. Johnsville, N. Y.
L. Gerster, Berne, Switzerland.
*T. W. Woodbury, Mount Radford, England.
Mrs. F. A. Dunham, De Pere, Wis.
T. F. Bingham, Abronia, Mich.
E. Bertrand, Nyon, Switzerland.
Frank R. Cheshire, London, England.
Rev. Wm. F. Clarke, Guelph, Ont.
Prof. C. V. Riley, Washington, D. C.
Hon. Edwin E. Willets, Lansing, Mich.

*Deceased.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.50,** if the order is received at this office before January 31, 1890.

Such a *remarkably low* club rate as the above, should induce every reader of the BEE JOURNAL to accept it without a moment's delay.

Honey Almanac.

This Honey Almanac places in the hands of bee-keepers a powerful lever to revolutionize public sentiment, and create a market for honey, by making a demand for it in every locality in America.

Each alternate page is an illustrated calendar for the month—making a complete Almanac for the year 1890.

Here is what is said of it by those who have seen the Honey Almanac:

I have disposed of nearly all of my Honey Almanacs. They are excellent "salesmen." I think that I shall have to send for more.—Mrs. S. E. Sherman, Salado, Tex.

The Almanacs are making business lively. I sold 230 pounds to-day to my neighbors. —O. S. Compton, Glenwood, Mich.

Its 32 pages are filled with interesting facts, figures and suggestions concerning the uses of Honey for Food, Beverages, Cooking, Medicines, Cosmetics, Vinegar, etc. Also, its effects on the human system are tersely noted; a brief refutation is given of the Wiley lie about manufactured comb honey; a short dissertation sets forth the mission of bees in fertilizing the flowers, and increasing the fruit product. Instead of being an injury to fruit, bees are the fruit-growers' best friends.

Prices:—25 copies for $1.00; 50 copies for $1.50; 100 for $2.50; 500 copies for $10.00; 1,000 copies for $15.00, delivered at the freight or express office here. The bee-keeper's Card will be printed upon the first page, without extra cost, when 25 or more are ordered at one time. Postage, 40 cents per 100 extra. All orders can now be filled as soon as received.

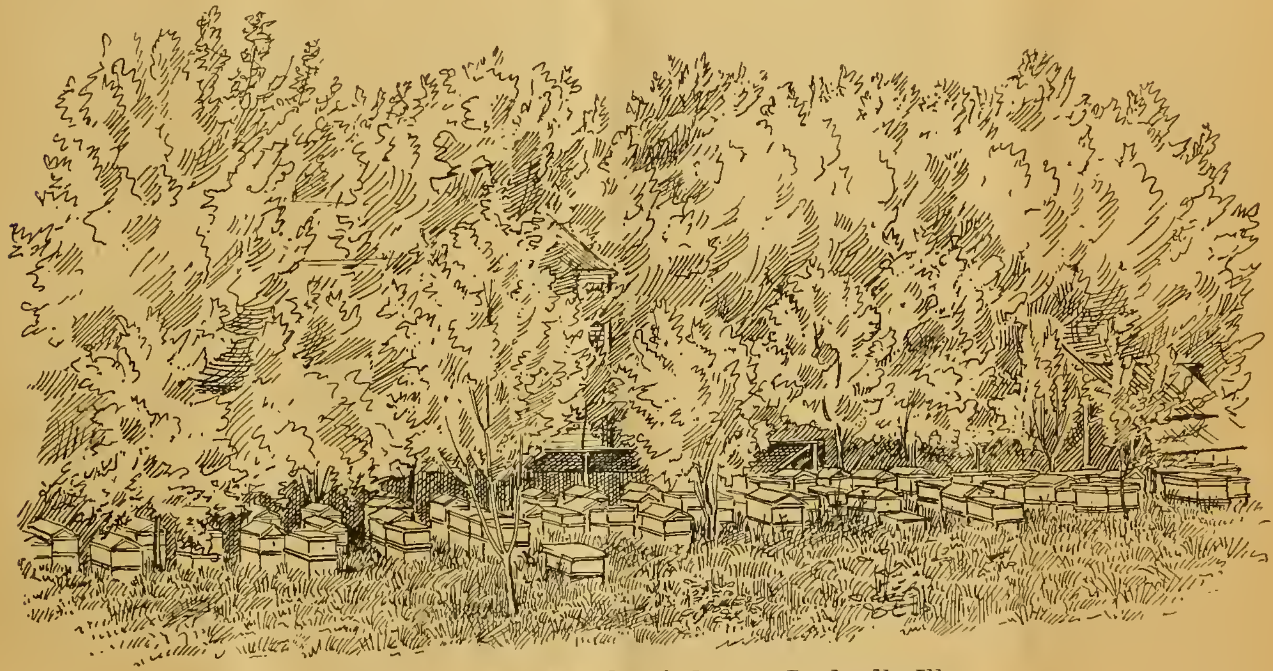
Excellent Paste.—To make paste that will stick honey-labels to glass, tin, etc., take two ounces of clear gum arabic, one ounce and a half of fine starch, and one-half ounce of white sugar. Pulverize the gum arabic, and dissolve it in as much water as the laundress would use for the quantity of starch indicated. Dissolve the starch and sugar in the gum solution. Then cook the mixture in a vessel suspended in boiling water, until the starch becomes clear. The cement should be as thick as tar, and kept so. It can be kept from spoiling by dropping in a lump of gum camphor, or a little oil of cloves or sassafras. This cement is very strong indeed, and will stick perfectly to glazed surfaces, and is good to repair broken rocks, minerals or fossils.

Sectional Committee for Rearing of Bees.—Chairman, Mr. Hermann Bernges, late forest manager, editor of the *Bienenvater* (Bee-Father). Second Chairman, Mr. Jos. Kamptner, house-proprietor at Unter-Dobling. Secretary, Mr. Alois Scholtys, officer of the Imp. R. Court and first lieutenant. Editor, Mr. Anthony Pfalz, editor of the *Imkerboten aus Oesterreich*, bee-master at Deutsch-Wagram, Austria.

The Canadian Government feels like assisting apiculture to the extent of its ability. At the late Convention at Brantford, this was exhibited by the following instance:

Prof. Wm. Saunders, Superintendent of the Dominion Experimental Farms at Ottawa and elsewhere, was called to the platform by President Mason. In a short address Prof. Saunders stated that while he was not well versed in bee-keeping, yet he hoped to learn more of it in the near future. Entomology seems closely connected with the scientific part of bee-keeping, and in this he was very much interested.

He explained the work of the Dominion Experimental Farms, and added that it was the intention of the Government to take up all lines in any way connected with agricultural pursuits as soon as it was possible to reach them. On one of the experimental farms in Manitoba, the Superintendent has a number of colonies of bees with which he is experimenting.



Apiary of Mrs. Martha Anderson, Bushnell, Ills.

Mr. Saunders promised the assistance of the faculty at Ottawa in any of the branches wherein bee-keepers were interested, and he thought that they could very often help solve difficulties in the entomological and botanical departments of bee-keeping.

Bees and Horticulture.—Mr. C. P. Dadant, at the recent meeting of the Illinois Horticultural Society, in discussing the relation of bees to horticulture, is reported to have said there are two main divisions of the question—the relation of bees to flowers, and their action upon fruit.

Bees are created undoubtedly to help in fertilizing flowers. This is too well known to need further proof, though a clear evidence that honey exists in the blossom to attract insects, for blossom fertilization lies in the fact that those flowers which yield no honey, have to produce enormous quantities of pollen to secure fruit fertilization.

Examples of this are corn and rag-weed, and even then these have to be congregated in large numbers to help fertilize each other. To carry out this fertilization, however, other insects than honey-bees are needed. For instance, the corollas of the clover blossoms are too long for the honey-bees, but the longer proboscis of the bumble-bee here comes into play. If the bees hurt flowers, we should find the corollas of some of the best honey-producing flowers broken and destroyed, but we do not.

As to the action of bees upon fruit, Mr. D. said that while they often draw the juice from injured fruit (poor stuff, too), they *never* injure sound fruit. The mandibles of the bee are not made to puncture, they are round and entirely devoid of teeth.

He also referred to the relation of bee-culture and horticulture as shown by their allied products—honey and preserves of different kinds; and the use of honey in wine making.

Purifying Casks for Honey.—Although we do not advise the general use of casks and barrels in the apiary, that have contained wine or alcoholic liquors, yet there are occasions when such receptacles can be used to excellent advantage, if cleansed, especially when the honey put into them is to be employed in feeding the bees in the spring, or for winter stores.

Chas. L. Carpenter, of New Jersey, in one of our valued agricultural exchanges, gives the following method to pursue when desiring to purify such receptacles so as to be profitably used again:

To remove the astringent qualities from a new oak cask, or the taste from a barrel which has held alcoholic liquor, nothing is necessary but to fill with cold water and let it soak a few days, changing the water two or three times. An old barrel which has been used for cider or vinegar, should be purified by sulphur fumes. Invert the barrel over a shovel or dish of live coals, upon which brimstone has just been thrown, and let it remain there for half an hour to an hour. Then soak the barrel with clean water, in which a pound of soda or a shovelful of ashes has been dissolved.

☞ Jacob Wollerskeim, of Kauffman, Wis., sends us a sample of his comb foundation, which has high side-walls and is well made.

The Edelweiss of the Alps.

This gem was sent us by L. Mrs. Harrison. The lines were written by an American lady who was traveling in Europe, and sent them to Mrs. H. by one of the party:

On Alpine heights there blooms a flower,
  So soft, so white, mid snow and ice,
Well meet to grace the *Yungfrau's bower,
  And mortals call it †Edelweiss;
For white must all that's noble be,
  And bloom from earth far, far apart;
So she that's robed in purity,
  Must bear an "Edelweiss" in heart.

*The Yungfrau is a snow mountain near Interlaken, and is a very grand sight to behold.

†The Edelweiss is a little white flower, like our daisy, and has a yellow center, and its leaves are thick, like cotton. It is under the snow, and in no other place. Its home is on the Alps.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

"Which Shall It Be?"

A. E. N. Rich—(Ethel Etherton.)

Henceforth in this beautiful land of ours.
One flower is to be the flower of flowers—
Our national emblem, our symbol of might,
Of patriotism, of truth and right.

Of our floral beaties from sea to sea,
Countless and curious, "Which shall it be?"
Shall it be the lily so pure and fair;
Fit emblem alike for bridal or bier?
Or the queenly rose, white, pink or red—
A coronet for a queenly head?
Or bright-eyed pansy? Heart's-ease, if you will,
So touchingly tender, so thoughtfully still—
Or the daisy? where meadow grasses wave,
In rocky rook, or by poet's grave—
Or trailing arbutus? daintily sweet,
In mossy bed at the tall pine's feet—
The first sweet harbinger of spring,
Faint-tinged with the red of the robin's wing;
Though full of fragrance, yet lacking power,
Too dainty—too scarce for the national flower.
Or morning-glory? of varied hue,
From the whitest white to the bluest blue—
Or brilliant poppy, with tasseled head
Of golden glory or richest red,
Or the passion flower tinged to its petal tips
With the crimson blood of a martyr's lips,
Or the brilliantly beautiful orchids rare,
Oft twined in the gipsy maiden's hair,
The snowball, peony, trumpet flower,
Of primitive Puritan pride and power?
Or stately sunflower, with gold-flecked disk,
And golden rays which a world might risk?
Into every heart it hath found its way
For its loyalty to the god of day,
And bears the likeness upon its face
Of the god it turns to with modest grace,
The floral symbol of life and light,
Like the sun by day, like the stars by night.

What is liberty but the light of truth?
What is life but love s fount of eternal youth?
What more beautiful thought could one flower hold
Than this gold-eyed gem in its settings of gold?
Proudly the floral world might yield
To have it emblazoned on flag and shield;
But a floral rival, nor friend nor foe,
In like gold-wrought uniform all aglow,
Has leaped to the front with a strong, swift bound
And with pride is holding the vantage ground,
As though let slip from the hand of God
And christened in falling, "the golden-rod."

Tall and graceful its golden plumes
Wayside, forest and field illumes,
And it gaily nods to each passer by,
Whether man of wisdom or maiden shy—
The youthful, the aged, the great, the small,
It has a bow and a smile for all—
Truly American; wonderful flower.

With the candidate's politic, pleasing power,
'Tis the flower of freedom! for everywhere
It raiseth up like the voice of prayer—
Springing spontaneous from the soil
With never a mark of mire or moil;
Wheresoever the foot of man hath trod
He hath measured all things with a golden-rod.

Tis the magic staff that lets him in
To the homes of virtue, the haunts of sin—
The wand that heals like an angel's wing
The heart of peasant, priest, poet, king,
Dame Nature, ever true to her law
Of correspondence, its beauty saw,
And scattered it broadcast over the earth
To symbolize true wealth and worth.

It is destined the flower of flowers to be
In the "the land of the brave, the home of the free!"
The ensign to herald a nation's power,
The golden censor; the people's flower.—*Sel.*

* * *

Our Premium-List Supplement describes many articles of great merit, and that are useful in every family. We have carefully selected them to offer as premiums for getting up clubs for our JOURNALS. We do this to *induce* our friends to devote a few hours of labor for us. Our JOURNALS are first-class in their lines, and are needed everywhere. We do not want any one's labor without remuneration, and the articles offered will pay for the labor of getting up clubs, and thus the arrangement will prove to be for our mutual advantage.

QUERIES and REPLIES.

Full Sheets of Foundation vs. Starters in Sections.

Written for the American Bee Journal

Query 677.—What per cent. more honey will be stored when using full sheets of foundation in sections without separators, than when using one-inch starters, and no separators?—C. P.

Not any.—WILL M. BARNUM.

Nobody knows.—M. MAHIN.

My experience says "no more."—H. D. CUTTING.

I have had no experience without foundation or separators.—A. B. MASON.

I do not know any one who can exactly tell.—C. C. MILLER.

Considerably more—perhaps 25 per cent. in a good season.—C. H. DIBBERN.

I will venture to say one-fourth more, but it may be more or less.—J. M. HAMBAUGH.

I cannot answer; it varies greatly. On the whole, I think that it pays to use foundation.—A. J. COOK.

A pound of beeswax costs 10 to 15 pounds of honey to the bees, so you can count it for yourself.—DADANT & SON.

It is hard to determine. By using full sheets of foundation, the bees are more facilitated in their preparatory work.—J. P. H. BROWN.

The difference would vary with the degree of the honey-flow, etc., and no safer answer can be given.—R. L. TAYLOR.

If the season is a good one, you will likely be surprised to see how little the difference is. In my experience, the difference is not enough to make up for the leathery septum that full sheets of foundation give to the honey.—G. W. DEMAREE.

I do not know. I do not use full sheets of foundation, for beeswax will not digest in my stomach.—MRS. L. HARRISON.

Much depends upon the time of year, temperature, honey-flow, and other conditions. Sometimes, no more; and again, double the amount.—JAMES HEDDON.

That depends upon whether the honey-flow is light and of long duration, or heavy and of short duration. More honey will generally be secured when full sheets are used, especially with a light honey-flow.—G. M. DOOLITTLE.

In my opinion, not so large a per cent. as we have been made to believe. I believe that a straight starter of foundation one inch wide is enough.—G. L. TINKER.

I have never tested this matter on large enough scale to speak positively, but I think that they will store more. That, however, is not the only reason for using full sheets—they fill the section more nicely.—EUGENE SECOR.

It would depend upon the locality, to some extent. In my own, where honey comes in slowly, owing to lack of bloom, the foundation will give a considerably larger amount. Where honey comes in rapidly, I do not think much if any difference will be found. Much will depend upon whether the colony is composed of young or old bees.—J. E. POND.

This all depends, and *depends* and *depends*. Ordinarily it is better to use full sheets of foundation, if it is nice, and as thin as can be made. The ordinary apiarist can get more honey, as a usual thing, and certainly in better shape with foundation, than without, and the crop ships better. These reasons are enough, without any mythical, percentage reason.—J. M. SHUCK.

This question cannot be answered definitely. It depends upon many things which are uncertain. The difference is probably very little.—THE EDITOR.

* * *

Proper Width of 1-Pound Sections Without Separators.

Written for the American Bee Journal

Query 678.—What is the proper width for the one-pound section (4¼x4¼ inches) when used without separators?—W. C.

One and ¾ inches.—M. MAHIN.

One and ⅞ inches.—DADANT & SON.

One and ¾ inches is a good width.—C. C. MILLER.

One and ½ to 1⅝ inches.—J. M. SHUCK.

One and 23-32 inches, or 7-to-the-foot.—R. L. TAYLOR.

One and ¾ inches, or 7-to-the-foot.—EUGENE SECOR.

One and ¾ inches, but for safe, salable sections, separators are indispensable.—J. M. HAMBAUGH.

I use a 1¼-pound section, making the same 2 inches wide.—G. M. DOOLITTLE.

One and ⅝ inches, or 7-to-the-foot pleases me well.—A. J. COOK.

I find that 1¾ inches, if nearly filled with foundation; but with separators, 1⅞ is better, as you get nearer to one-pound—H. D. CUTTING.

I do not know. Our "great lights" differ on this subject, but about 22 cubic inches of comb honey weigh a pound, and there will be more honey in sections where separators are not used, than where they are.—A. B. MASON.

One and ¾ inches. Sections of even weight cannot be produced without full sheets of foundation, and separators.—C. H. DIBBERN.

Just 1¾ inches scant, or 7-to-the-foot, either with or without separators. That seems strange, doesn't it? I would not have thought that the same width was right, both with and without separators, had I not *proven* it by radical and repeated tests.—JAMES HEDDON.

I believe that the 7-to-the-foot section is best, without separators; but I could not advise the most painstaking to use sections without separators. If we would produce the choicest comb honey, we must use wood separators, and the open-side sections.—G. L. TINKER.

After trying the different widths made, I prefer 1¾ inches as the best width where no separators are used; and as I do not care to be bothered with more than one size or width, I use the 1¾, with or without separators.—G. W. DEMAREE.

About 1⅝ inches, in my judgment. Some bee-keepers of experience prefer 1½, and some 1¾ inches. In no case will sections be filled so as to weigh just a pound each—a variation of 2 to 4 ounces will usually be found.—J. E. POND.

Two inches is as wide as a section should be, but a 4¼x4¼ section, 2 inches wide, will not hold one pound, unless it is unusually well filled out. Sections 1⅝ or 1¾ will be filled out nicer and more perfectly than wider ones, although they will not hold a pound, if only 4¼x4¼ inches.—J. P. H. BROWN.

About 7-to-the-foot; but separators should be used, unless the greatest care is taken to assort when packing in crates for the market, to prevent rubbing and leakage.—THE EDITOR.

CORRESPONDENCE.

SMOKING-BOARD.

Expelling the Bees from the Section-Cases.

Written for the American Bee Journal

BY J. W. BAYARD.

Much has been written of late, and many enquiries made, as to the best and most effective method of expelling bees from the surplus stores. Smoke, being the acknowledged factor in terrorizing and driving as well as quieting bees, has long been used for that purpose, and when judiciously and intelligently applied, it has been a most satisfactory agent.

My plan is inexpensive, simple and efficient, and, I trust, will command the attention of all bee-keepers who work their apiaries for comb honey. It is as follows:

Take a smoothly-planed board just the size of the section-case, only about two inches longer; nail three strips $\frac{7}{8}$x$\frac{7}{8}$ on the three face edges of the board, leaving one end open for smoke, and now it is ready for work, if the honey is ready to take from the hives.

To do the work quickly, arm yourself with smoker, chisel, and smoking-board, located on some convenient hive or other place Now lift the hive-cover clear away, turn back the enameled-cloth quickly from the case, pour in smoke rapidly between all the openings of the rows of sections, and in about one minute, if well done, it will frighten nearly all the bees below.

Then with chisel quickly remove the case to the smoking-board, cover the hive securely, and pour the smoke into the "pocket" between the board and case, and the air-current created thereby, will lift bees, smoke, and all to the surface, and with a light brush of long feathers, made from the tail of a turkey, whisk them off, and the work is done. I can do all this inside of eight minutes, on an average, and have the honey in the honey-house without a bee being left in a single case.

In this way I can go through a hundred colonies in a day, and lift all the surplus honey that is finished, without attracting the cupidity of a single robber.

By operating the foregoing plan, no laggards are left behind to cut holes in the cappings, and otherwise mar the combs, then leave through some escape when they get ready.

Some have found fault with smokers for throwing sparks and ashes on the combs when operating. This is the result of filling the smoker-furnace with fine, trashy stuff, instead of clean chips of rotten wood, that emit no sparks or soot. I use apple-tree wood for my smoker, and find that it is the best of all.

I find that the best time to remove surplus honey from the hive, is from 10 a.m. to 5 p.m., when the bees are largely in the fields. Early in the morning or late in the evening they are almost sure to sulk and adhere to their stores.

Athens, Ohio.

IN COUNSEL.

Report of the Northern Illinois Bee-Convention.

The Northern Illinois Bee-Keepers' Association met in annual session in the Supervisor's room of the Court House at Rockford, Ills., on Dec. 17, with Vice-President Sweezy in the chair, with the following members present, who reported as follows:

	Colonies. Spring.	Colonies. Fall.	Comb. Lbs.	Ext. Lbs.	Pounds. Unsold.
M. Adams	24	24	1,800	500	700
F. Benjamin	5	14	500	....	....
G. Blackburn	140	140	2,000	16,000	10,000
O.J.Cummings	16	38	900	....	300
H. W. Conklin	12	20	600	700	....
D. A. Fuller	70	120	5,000	400	....
R. Gammon	54	55	2,800	4,200	500
L. Highbarger	40	70	2,000	1,500	500
S. H. Herrick	22	37	800	325	...
Wm. Hill	53	93	4,100	2,700	1,700
V. W. Keeney	20	45	700	400	500
A. G. Kallner	12	16	400	200	300
B. Kennedy	33	65	2,700	150	....
W. M. Rose	7	13	200	....	....
O. H. Sweezy	12	20	800	....	100
C. H. Stordock	97	127	1,497	5,766	4,000
M. S. Woodworth	17	25	800	....	....
Chas. Winn	....	23	....	....	....
R. Marsh	11	21	700	....	....
W. A. Webb	1	7	100	180	....
E. Whittlesey	50	73	1,500	1,100	800
O. Taylor	45	82	2,900	....	2,000
Totals........	741	1,128	32,797	34,121	21,400

POLLEN IN THE SECTIONS.

The first question was, "How to prevent pollen in the sections."

Mr. Gammon, of Roscoe, said that he had been troubled where he had hived swarms on starters; but only 4 or 5 swarms had troubled him.

Mr. Kennedy, of Milford, said that some of his old colonies had troubled him, but he could give no remedy.

Mr. Herrick, of Rockford, had had so little trouble that he would not bother with any prevention.

Mr. Whittlesey, of Seward, never was troubled in that way.

HOW TO PARTLY PREVENT SWARMING.

Mr. Hill, of Whiteside, said that he had clipped the queens' wings, hived side by side, and moved them in eight days. He tried all the methods that he had read of, and had decided that he might just as well try to keep young folks from marrying.

Mr. Gammon said that he had tried a great many ways, and the most satisfactory way to him was to put the old swarm on top of the new one, and extract from them; that is, to work them for extracted honey the rest of the season.

Mr. Herrick said that his bees would swarm, but he put two or more new swarms in a hive, thus preventing a large increase, and making extra good colonies.

The convention then adjourned until the afternoon, when it was called to order by President Highbarger.

QUEENLESS COLONY—UNFINISHED SECTIONS.

The first question in the afternoon was what to do with a colony that is queenless in the spring, which brought an almost unanimous reply, summed up as follows: Double up with one that has a queen.

The next question was, "Will it pay to use the unfinished sections the following spring, after extracting the honey?"

Mr. Hill did not think that it would be as white.

Mr. Gammon thought that by cutting down the comb very close, they could be used.

Mr. Herrick said that he had used them successfully by putting 2 or 3 sections in the center of the super, to coax the bees up.

President Highbarger thought that the honey was just as good, but in eating the combs they would appear to be tough.

DOES GOLDEN-ROD YIELD HONEY?

The next question was, "Have you had any honey from golden-rod?"

Mr. Hill said that there was about 40 different kinds, and that the bees worked on some of them.

President Highbarger said that he never had seen the bees work on golden-rod.

Mr. Stordock's bees worked on it some, but he could not say that they gathered any great amount of honey from it.

Mr. Herrick never saw any bees on golden-rod.

EXTRA COMBS FOR EXTRACTING.

"Will it pay, when working for extracted honey, to have extra combs and supers, and not extract until the end of the season, or use one super and extract often?"

Mr. Whittlesey said that he used extra supers, and did not extract until fall.

Mr. Gammon thought that it paid him better to extract often, and save extra combs.

President Highbarger preferred to extract often.

The convention then adjourned until Wednesday morning, Dec. 18, when the President called the convention to order.

BEE-DIARRHEA—CAUSE & PREVENTION.

Mr. Whittlesey said that it came from poor honey. Extract, and feed sugar.

Mr. Rice thought that dampness and poor ventilation had something to do with it.

President Highbarger said that it was caused by poor honey.

EXTRACTED VS. COMB HONEY.

Mr. Blackburn said that his highest comb honey yield was 112 pounds per colony, while one colony stored almost 300 pounds of extracted.

Mr. Whittlesey said that from 15 colonies he obtained 1,100 pounds of extracted honey, and from 35 colonies, 1,500 pounds of comb honey. It had been a poor season for him.

The election of officers for the ensuing year was then held, and resulted as follows: President, S. H. Herrick, of Rockford; Vice-President, A. J. Sweezy, of Guilford; Secretary, D. A. Fuller, of Cherry Valley; and Treasurer, O. J. Cummings, of Guilford.

The next annual meeting was voted to be held at Rockford; the May meeting at Cherry Valley; and the August meeting at Harlem.

The Association instructed the Secretary and Treasurer, after all expenses were paid, to send the balance in the treasury to Rev. L. L. Langstroth. The amount, with some donations, was $5.85.

D. A. FULLER, *Sec.*

QUEEN-CELLS.

Questions about Eggs Found in Queen-Cells.

Written for the American Bee Journal
BY ALLEN LATHAM.

I was interested in what was said on page 800 of the AMERICAN BEE JOURNAL for 1889, concerning the placing of eggs in queen-cells. Mr. Dadant says that the size of the cell governs the sex, and thinks that the queen does not lay eggs in queen-cells. I have always been interested in this question; I believe it to be all nonsense to say that the queen does not lay in queen-cells. I have one or two queries which I should like Mr. Dadant to answer, viz:

1. If the workers place the eggs in *old* queen-cells, why do we never find them there when a queen is removed, and the bees go to work to rear another? Surely it would be easier to remove an egg than to build an entirely new cell.

2. Why, when foundation sometimes sags and leaves the cells nearly as large as drone-cells, does the queen lay eggs in those cells, which eggs develop into workers?

3. Has any one ever seen an egg in an *old* queen-cell (not a queen-cell made out of two or three worker-cells) in a hive without a queen, unless such egg may have been placed there by a laying worker?

What I wish to bring out by the above questions, is this: Eggs are found in queen-cells; they do not go there themselves; they are never placed there except when a queen is in the hive; and if a comb containing eggs is given to a queenless colony, none of these eggs are transferred to any queen-cells.

The above statements are conclusions drawn from my own experience, and I may be "away off," yet I have seen the same so many times that I feel pretty sure.

Cambridge, Mass.

WINTER.

How the Bees in Winter Quarters are Doing.

Written for the Prarie Farmer
BY MRS. L. HARRISON.

It is a little past one p.m. and I made a call on my bees to say "How dy' do," and they answered only by a happy murmur. O, how I wish all my bee-loving friends could see my little pets in their cozy winter quarters. To-day, Dec. 8, 1889, the thermometer stood at 48° in the bee-cellar, and at 72° in the shade out-of-doors. The bees were carried in Dec. 5, which was a warm, pleasant day, and bees were upon the wing. Those to be removed were confined to their hives in the early morning, by closing their fly-entrance. It is so much nicer handling hives when they are clean and dry, than when covered with snow and sleet. And if the hives are frozen down they have to be loosened with a jar, which is very irritating to the inmates, and a person can handle them more quietly during mild weather than when pinched with cold.

There has been considerable said about lugging hives in and out of cellars, as though it was something terrible. Our cellar has no outside door, and the bees were handed in through a window. Two men put down 56 colonies in about two hours, and the assistant charged 75 cents for his labor. It would take several days to make them as comfortable upon their summer stands, and quite a job to unpack them another season and clean up the litter. The hives are two-story Langstroth, and only the lower one, containing the brood-nest, is put down.

I have room for only about half of the colonies of the apiary, and the remainder are to remain upon the summer stands. At the present writing it seems like folly to store any of them, as this month thus far has been so very mild; but old Boreas may teach us, before long, that he has not entirely deserted this mundane sphere, and at all events preparations should be made for his coming.

Some years ago I made chaff-cushions to protect the bees during winter, and by carefully housing them during the summer, they are still fit for use. Every fall new muslin sheets are spread over the frames, above the devices, and then the chaff-cushions are put in. The bees propolize up the muslin during the year, so that the moisture will not pass through it, and they will keep dryer if new is used for winter. And if they have eaten holes in the muslin, they will creep up under the cushion and large numbers perish, as they cannot find their way back. I raise the cover slightly, so that there is at all times a free circulation of air above the cushion.

Occasionally during a very cold spell a cover has been shut down, and I invariably would find the cushion frozen and the cap full of frost, while those that were raised would be dry. I prefer to have the entrance fully open, and the back of the hive as high again as the front, so if frost gathers and melts in the hive, it will run out, and the bees can more readily carry out their dead debris.

Peoria, Ills.

LIQUID HONEY.

The Production and Marketing of Extracted Honey.

Written for the American Bee Journal
BY C. E. WOODWARD.

It has taken the American apiarists a great while to decide that they have real use for the honey-extractor. Experimenting has demonstrated that honey-extracting is an economical proceeding, and, properly handled, is one of the greatest inventions in the bee-keeping world.

The people of America seem to be awakening to the fact that the honey-extractor is suited to the wants of the honey-producing world; and if there is any one point that demands careful study, it is the manner in which extracted honey is placed upon the market, to meet the wants of the consumer. Hence, too much attention has been given to our own ideas in trying to get the very last cent out of it possible.

Too cheap receptacles have been used, to a great extent, in placing extracted honey upon the market in very bad condition. Glass tumblers, holding one pound, are the best receptacles for extracted honey. Those glasses having a large mouth will allow the use of the contents in either the liquid or candied form. The glasses also show just what the honey is, and the variety of honey will present a nice appearance in them.

Owing to the convenience in which it can be handled, the cheapness with which it can be produced, and the fact that it is the only pure article strictly by itself—no intermingling of beeswax—places it at the front as the most desirable honey for consumption. Comb honey is undoubtedly a thing of beauty; hence we believe that extracted honey can be produced in its best possible shape at one-half the cost of comb honey.

It is an impossibility to adulterate honey so as to deceive. It has been said that "the American people love to be humbugged." You can fool the bee, but you cannot fool the people with adulteration of extracted honey. When the extractor is used, we can keep each variety of honey separate, and by itself in the majority of cases; hence I may say that, in my opinion, to make bee-keeping a grand success, is not to confine yourself wholly to comb honey production. The extractor is here, and here to stay.

Xenia, Ohio.

SEASON OF 1889.

Golden-Rod—The Bee-Keepers' Union—Bee-Literature.

Written for the American Bee Journal

BY J. B. SYPHRIT.

I commenced last spring with 19 colonies, and increased them to 38, by natural swarming. They are all in good condition. I put them into winter quarters on Nov. 28. I obtained 1,400 pounds of comb honey, and 600 pounds of extracted, mostly clover. The fall crop was cut very short, but I got some buckwheat and smart-weed honey.

I winter my bees in a cellar 18x32 feet, and 8 feet high, with a tile running diagonally, with ventilators of 4-inch tile in the windows. All of our vegetables are kept in the same cellar; we go in and out from the outside, and the light does not seem to disturb the bees.

I put nothing on the top of the brood-frames, but leave the hive-caps on; this gives a good chance to feed next spring, to stimulate for breeding. I have wintered them in this way for a number of years, with good results. I use the 10-frame Langstroth hive.

Regarding the golden-rod, I have watched it with a vigilant eye for several years, and have never seen a bee on it. I consider it, as a honey-plant, about the same as I do the potato-blossom. Sweet clover kept blooming for two weeks after our first frost. Nectar in white and Alsike clover was abundant the past season in southeastern Iowa. We have had a great number of basswood trees in this part of Iowa, but the woodman's axe is clearing them out by the thousands every year.

The principal part of my honey was obtained from Alsike clover. Comb honey has been selling in our home market as low as 8 cents per pound. I have sold none for less than 10 cents. Those bee-keepers who live along the Mississippi bottoms, obtain a very dark honey, but it seems to sell as well as the finest clover honey among home consumers. The weather has been very mild, with plenty of rain up to the present.

THE BEE-KEEPERS' UNION.

In viewing the list of members and last report of the Manager of the National Bee-Keepers' Union, I was struck with amazement when I beheld so small a fraction (about one out of every thousand) of the bee-keepers belonging to the Union. The light in which I view the Union is this: There is not one bee-keeper in the 300,000 but has received more individual benefit from the decision in the Clark case, than it cost annually to be a member. Every individual taking the AMERICAN BEE JOURNAL should be a member of the Union; and every man and woman that keep bees, should be a reader of the AMERICAN BEE JOURNAL. I could no more think of keeping bees without bee-literature, than I would think of farming without horses.

READING BEE-LITERATURE.

I often accost a man that keeps bees, thus: "See here; your bees are in a very bad condition. They are in old, rickety boxes; they are full of moths; they are too weak to accumulate nectar, and have many other faults. Now, see here; there is a weekly paper published that costs only $1.00 a year. I will show it to you, and if you will take it, it will teach you how to handle bees, how to keep them in good condition, and how to make them a source of pleasure and profit to you." The reply is invariably embodied in this: "Well, I expect that is very nice, if I could have my bees as nice and clean as yours. I am keeping a few bees for my own use, and it will not pay me." When I tell them that one colony cared for in the proper time and manner is of more value than twenty old, cracked boxes full of moths, they say, "Well, if I could handle them as you can, I would not mind taking it." But it is all in vain to try to get them to see that the bee-papers will teach them all this.

Newport, Iowa.

HONEY.

Not Digested Nectar—Report for 1889.

Written for the American Bee Journal

BY J. A. MARSH.

The AMERICAN BEE JOURNAL is a most welcome visitor, and is read before any other of many periodicals. Many of its contributors are able and reliable, but one of the most able and respected has been very careless and unfortunate in the use of a word. When Prof. Cook calls honey "digested nectar," I hope that he will take back the "digested" part of it as gracefully and as hastily as his motions will allow. The bees have no intricate patent; it is an open-kettle process, as old as Adam, and as simple as boiling maple-sap.

POOR SEASON, GOLDEN-ROD, ETC.

This has been the third poor season in this locality. May was dry, and bees found about enough honey until June 15 to meet daily wants; then it rained for 15 or 20 days, and, contrary to other bee-keepers, I have to say that my bees gathered honey while it rained, faster than at any other time; also, that gathered in the wet spell was the most beautiful honey; the sections were free from propolis, and the comb was light and white; while the honey gathered afterwards, was dark comb, heavy, and the sections daubed until they would break rather than part.

"Gill over the ground" is my best honey-producer, coming earlier and lasting longer than white clover, which comes second, while golden-rod amounts to nothing, as I never saw bees visit it, although I watched it daily in the hope that it would prove of some benefit; yet I think it a fit emblem of our glorious country, and I would cast my vote for it, if it was not for the "corner" that Mr. Prang seems to have on that privilege.

I started in the winter of 1888 with 3 colonies; a small swarm came to me on Feb. 15, 1889, which I hived and fed, although there were not more than a quart of bees, and they lost their queen on April 2. I furnished eggs the next day, and they had a laying queen by April 29. They dwindled until there were not more than a handful, but finally grew strong, and have now enough honey to carry them through the winter. I consider April very early for queen-rearing in Missouri.

I have now 14 colonies, half in good condition, and the rest short of stores. I take great interest in reading reports from all over the country. Let all bee-keepers report to the AMERICAN BEE JOURNAL.

Scotia, Mo.

BEE-ESCAPE.

The Dibbern Bee-Escape Proves to be a Success.

Written for the American Bee Journal

BY DR. G. L. TINKER.

As the weather was quite warm today, and the bees flying freely, I thought that it would be well to try the new bee-escape which Mr. Dibbern described on page 797 of the AMERICAN BEE JOURNAL for 1889, and has so kindly donated to bee-keepers.

I had a colony on which I had placed a section-case with partly-filled sections. I unpacked the hive, and took it off and put on the bee-escape, placing over it the case of sections, at 1 o'clock, p.m. There were about a pint of bees in the sections. At 4 o'clock, I looked, and found that every bee had gone below—not one was left.

Should this escape be as effectual as it now seems to me, it is going to prove of great value for getting bees out of brood-chambers, as well as out of sections.

The escape can be made in a ½-inch board, so as not to project on either side, and thus endanger killing bees in putting it on the hive, or having it bound down with propolis if left on the hive a day or two, as it would be if the cones projected below the board. I make mine as follows:

I have an inside cover to put on the hive in my winter-case. It is made of thin boards (¼ inch thick), and as long as the hive is wide. These are nailed to two cleats as long as the hive, and ¾x1 inch square. I bored a ⅝-inch hole in the center of another thin board to fit in between the cleats. On this board was attached the cones. I then cut out a place in the cover, the same size as the cones. The board with cones was then nailed on so that the under surface of the cover was flat, or even where the cones came through. At the apex, I bored another ⅝-inch hole through the cover, but not through the board on top, This lower hole was where the bees came out.

On top of the upper board was nailed 4 cleats, ¼x¾ of an inch, about 7 inches long. These set up edgewise, one end against the cleats of the cover, and the other end close to the hole in the center. The 4 cleats thus converged about the hole so that the bees in trying to get out would all run, finally, into the hole in the center, and thus pass through each of the cones, and come out at the auger-hole below.

Between each of the long cleats of the cover, which are nailed on flush with the side, is nailed a piece of the same hight at each end, making a shallow tray 1-inch deep. The section-case rests on these cleats. It seems to me that the 4 converging cleats to the hole in the center will aid very much in getting the bees out of a case of sections speedily. Bee-escapes of the above description can be made for about 20 cents each.

I have been somewhat opposed to bee-escapes, to get bees out of sections, but this one is so cheap and easy to make, and withal effectual, that I believe it will come largely into use.

My favorite plan of getting bees out of sections has been to smoke them out, first smoking the bees down, then lifting off the case and standing it on end, on the front end of the hive. An assistant worked the smoker, blowing the smoke through the sections, while I used a little hand-broom to brush off the bees as they run out, down at the entrance. In this way comb honey can be taken off very rapidly—about as fast as the assistant can carry it away. My objection to this plan is the rough treatment that we are obliged to subject the bees to. It seems cruel to thus abuse them, and force them off from their honey.

The Dibbern bee-escape will not only save labor to the bee-keeper in taking off honey, but enable us to give our bees humane treatment at the same time.

New Philadelphia, Ohio.

Convention Notices.

☞ The next annual meeting of the Ontario Bee-Keepers' Association will be held in Belleville, Ont., in the City Hall, on Jan. 8 and 9, 1890

W. COUSE, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.

D. A. FULLER, *Sec.*

☞ The Indiana State Bee-Keepers' Association, will hold its tenth annual meeting at Indianapolis, Ind., on Wednesday, Jan. 15, 1890, at 1 p.m. All bee-keepers are cordially invited.

GEO. C. THOMPSON, *Sec.*, Southport, Ind.

☞ The twelfth annual meeting of the Nebraska State Bee-Keepers' Association, will be held in the Lecture Room of Nebraska Hall of the State University, at Lincoln, Neb., on Jan. 15, 16 and 17, 1890. Every bee-keeper and lover of honey is invited to meet with us. The Horticultural Association meets at Lincoln at the same time, and arrangements are now being perfected to hold joint sessions.

J. N. HEATER, *Sec.*, Columbus, Neb.

☞ The annual meeting of the Colorado State Bee-Keepers' Association, will be held in the Chamber of Commerce building, in Denver, Colo., on the third Monday in January, 1890, for the election of officers and other business. Everybody is invited to attend.

E. MILLESON, *Pres.*

☞ The Eastern New York Bee-Keepers' Association, will meet in Convention, Jan. 20 and 21, 1890, in Agricultural Hall, Albany, N. Y., at 10 a.m. All interested in bee-keeping are cordially invited to attend. The Farmers' Institute is held at the same place on Jan. 22 and 23, 1890.

W. S. WARD, *Sec.*, Fuller's Station, N. Y.

☞ The 24th annual meeting of the Michigan State Bee-Keepers' Association, will be held at Lansing, Mich., in the Capitol Building, on Dec. 26 and 27, 1889. At that time nearly all railroads sell half fare tickets; a few railroads charge one-and-one-third fare for the round trip. Reduced hotel rates will be given at the Hudson House. All are cordially invited.

H. D. CUTTING, *Sec.*

☞ The 21st annual meeting of the New York State Bee-Keepers' Association will be held in the Court House at Rochester, N. Y., on Feb. 5, 6, and 7, 1890. Reduced rates will be given at hotels and on all principal railroads. The programme and full particulars will appear in due time. Each county association is requested to send two or more delegates.

G. H. KNICKERBOCKER, *Sec.*

☞ The annual meeting of the Vermont State Bee-Keepers' Association, will be held at Burlington, Vt., on Jan. 21 and 22, 1890. Excellent hall accommodations have been secured at the VanNess house. The Central Vermont Railroad has granted round-trip tickets from the following places: Rutland, White River Junction, Cambridge Junction, Richford via St. Albans, Ticonderoga, and all intermediate points, to Burlington and return for fare one way. A good meeting is expected, and all are invited. For further information and programmes, apply to the Secretary,

J. H. LARRABEE, Larrabee's Point Vt.

Postal Notes are no safer to use in letters than bank bills. Any one can get the money on them. A Money Order can be obtained at the post-office or at the express office for 5 cents (only 2 cents more than a Postal Note), and is perfectly safe; if lost it can be re-issued.

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 20.—Comb honey is dull and lower, now quoted at 12@14c. Extracted, 7@8c., with few sales. Beeswax is now in good demand, at 24@25c.

M. H. HUNT, Bell Branch, Mich.

BOSTON, Dec. 26.—Sales are slow. Fancy white clover 1-lbs., 16@17c.; fair to good, 15@16c.; 2-lbs., 15@16c. Beeswax, 24c.

BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, Dec. 27.—White clover 1-lbs., 12@13½c.; basswood, 11@11½c.; buckwheat, 8@10c. Extracted, 6½@7½c. Beeswax, dark, 23@24c.; bright, 25@26c.

S. T. FISH & CO., 189 S. Water St.

CHICAGO, Dec. 27.—Sales are light, at 12@12c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.

R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Dec. 24.—Demand is light and prices lower, owing to bee-keepers offering honey at 11@12½c., delivered throughout the West. Very fancy 1-lbs., 12 in a crate, 13 cts.: good, 12½c.; dark, 10c. Two-lbs., white, 12c.; dark, 10c. Extracted, white, 7c.; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

CINCINNATI, Dec. 24.—Demand for honey has been slow for a month or more, with a full supply of all kinds on the market. Extracted brings 5@8c.; while comb is sold at 14@16c.—Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,

Corner Freeman & Central Aves.

MILWAUKEE, Dec. 27.—Market dull; only best grades demanded. White 1-lbs., 13@14c.; 2-lbs., 11@12c.; dark 1-lbs., 12@13c.; 2-lbs, 10@12c. Extracted, white, in barrels, 7@7½c.: in ½-barrels and kegs or tin, 7½@8c.; dark, in barrels, 6@6½c.; in kegs, 6½@7c. Beeswax, 22@25c.

A. V. BISHOP, 142 W. Water St.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Jan. 8, 9.—Ontario, at Belleville, Ont.
W. Couse, Sec., Streetsville, Ont.

Jan. 15.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 15-17.—Nebraska State, at Lincoln, Nebr.
J. N. Heater, Sec., Columbus, Nebr.

Jan. 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Denver, Colo.

Jan. 20, 21.—Eastern New York, at Albany, N. Y.
W. S. Ward, Sec., Fuller's Station, N. Y.

Jan. 22.—Vermont State, at Burlington, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Feb. 5-7.—New York State, at Rochester, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM
OUR LETTER BOX

Bees Bringing in Pollen.

On Sunday and Monday, Dec. 15 and 16, my bees, at my home apiary, were bringing in pollen. All the cranky uproar about bees being "a nuisance" here is a thing of the past. Z. A. Clark.
Arkadelphia, Ark., Dec. 20, 1889.

[We are glad to know that like "the star-spangled banner," the bees are still there. Cranks may cause an uproar for a time—but it soon passes away, and they are likewise forgotten. The right, justice and truth are eternal, and though they may be "crushed to earth," they will rise again, and endure co-eval with the sun, moon and stars.—Ed.]

◆

Excellent Season for Bees.

Our bees are safely put away into their winter quarters in the cellar, with plenty of stores of their own gathering. This is the first time for three years that we have not had to feed them to carry them through the winter. The past season was an excellent one in the way of increase and the storing of honey; white clover yielded well, though basswood was a failure, and Spanish-needle did but fairly. From present indications there will be an immense growth of young white clover for next season.
John Nebel & Son.
High Hill, Mo., Dec. 11, 1889.

◆

Small Fruits and Bees.

I keep bees for both profit and fun. I have about five acres of small-fruit to handle, consisting mostly of blackberries and raspberries. I have now in the cellar 34 strong colonies. I started last spring with 12, and have taken off 1,100 pounds of comb honey. The "fun" comes from seeing the little army of bees working early and late, gathering the sweets that otherwise would go to waste in my berry-field, and at the same time increasing my chances for a full crop of fruit.
C. H. Pond.
Kasson, Minn., Dec. 7, 1889.

A Boy's Experience with Bees.

"Jimmy, there goes an after-swarm to the woods. Catch them, and you may have them." I gave a chase, and succeeded, after a run of two miles, in heading them off in a cornfield, and by throwing dirt, made them return and alight on a bush by the way. I went to the nearest house, obtained a few rags, matches, and a little box, and then shook the bees on the ground, smoked them in, and returned home with my bees. I put them into a 9-frame Langstroth hive, and they rewarded me with 40 pounds of nice comb honey in one-pound sections, and I have a strong colony of Italian bees in good condition for wintering. I am 13 years old, and I think that I will make a bee-keeper. Father commenced the season with 18 colonies, increased them to 44 (minus my one colony), and obtained 1,500 pounds of comb honey.
James Garfield Daggett.
Conrad Grove, Iowa.

◆

Beginning in Bee-Keeping.

In the spring of 1888 I bought 2 colonies of bees in box-hives, and transferred them into Langstroth hives. I have now 13 colonies of hybrid bees. S. N. Little.
Pepin, Wis., Dec. 12, 1889.

◆

Large Crop of Honey.

My report for the season of 1889 is as follows: I took 3,050 pounds of comb honey from 65 colonies, and 43,550 pounds of extracted honey from 285 colonies.
Frank McNay.
Mauston, Wis., Dec. 12, 1889.

◆

Results of the Season.

Here is my report for 1889: I commenced in the spring with 38 colonies, increased them to 64, and took 1,300 pounds of extracted honey, and 1,200 pounds of comb honey in one-pound sections.
Geo. A. Kerr.
Lowell, Mich., Dec. 12, 1889.

◆

Wonderful Yield of Honey.

My honey crop was so large that I did not report it sooner, as I wish to be believed, or considered a man of truth. I took 4,500 pounds of extracted honey, and 3,500 pounds of comb honey—all from 37 colonies, spring count. E. S. Hovey.
Swanton, Iowa.

◆

Honey Crop of South Dakota.

The honey crop in South Dakota was good, being mostly from milk-weed and golden-rod, and some parasite honey, in the form of honey-dew on box-elder trees, but of a dark color, and poor quality. Bees are flying briskly to-day.
R. A. Morgan.
Vermillion, South Dak., Dec. 9, 1889.

◆

Swarming Out—Extracting.

I started last spring with 17 colonies of bees, and my crop of honey was 1,500 pounds, all in one-pound sections. It was very dry here (Blue Earth county); the basswood crop was just fair, and the rest of the crop was all buckwheat honey. I did not get a pound of fall honey. I had a big time with my bees swarming out the past season—6 swarms swarmed out 13 times. My hives were all new ones, and clean. The queens' wings were all clipped except one, and that one went to the woods. My bees are 20 rods from heavy timber on the north. I have a splendid location for bees. Some of the unruly swarms would leave after building comb for 3 or 4 days, and had 2,000 eggs laid. As they would try to leave, I would cage the queen and place her on the alighting-board, and they would have a good flight and then return. Some of the swarms settled 50 feet high; they would generally hang about 30 minutes, and back they would come.

My bees are all in the cellar, but it is hard to keep the cellar cool this winter, as the weather is very mild. A few days ago it rained, and the roads are terrible. Can honey be extracted from unfinished sections in the winter, if the sections are put in a warm room, about 80 degrees?

[Yes; honey can be extracted in a warm room, at any time.—Ed.]

◆

Bees Did Well.

My bees have done well this year. I started in the spring with 14 colonies in poor condition, 2 of them being queenless, but they built up and stored 867 pounds of honey in one-pound sections, and increased them to 21, all in good condition. I could not get along without the American Bee Journal. Austin S. Straw.
Edwardsville, Mich.

◆

Bees Flying Freely.

One week ago to-day the bees were out and flying as lively as at any time in the summer, and some who had clothes out to dry, had to wash them over, as the bees spotted them badly. I was looking for the same thing, but failed to find where they had specked a thing, although they all have quite an amount of honey-dew for winter stores. H. M. Seeley.
Harford, Pa., Dec. 16, 1889.

◆

Poor Season for Bees.

My 27 colonies of bees are on the summer stands, and are in pretty good condition, though some may be short of stores, but I think that they have enough to last until March 1. They did not store 100 pounds of honey last summer on account of the cold weather the latter part of May and first of June; then I had to feed every colony to keep them from starving, and when honey came, with warm weather, the bees had no brood; so the result can be imagined. Abe Hoke.
Union City, Ind., Dec. 15, 1889.

◆

Honey from Golden-Rod.

I vote for the golden-rod as our national flower, for my 53 colonies filled their hives to overflowing with honey from it last fall: some were so full that I had to extract some of it to get empty combs for the bees to cluster on in the winter. My crop of honey the past season was 1,500 pounds from 35 colonies, spring count. The season was too wet. Wm. B. McCormick.
Uniontown, Pa., Dec. 18, 1889.

◆

Bee-Keeping in England.

The honey season here in England has been a good one, generally speaking. We had a beautiful spring—just the very thing to suit the bees, and consequently swarming was very prevalent, as the bees bred very fast. The early part of the season, and up to July 10, was everything that could be desired, when a sudden change came—rain, rain, was the order of the day, so that practically the honey season was over for the year. Our "fall" (American) honey never amounts to much here, except in the heather districts. At this date very severe frosts have set in, which is rather early for us, but our bees are all out-of-doors, and some are in half-inch hives; but if all have plenty of good stores, they will undoubtedly come out all right in the spring. Starvation kills many more bees than cold, and last winter thinned the ranks of our bees sadly, thousands of colonies succumbing; but the past season has pretty well made up the deficiency by excessive increase. The AMERICAN BEE JOURNAL just fits a weekly vacuum here.

HENRY NEVE.

Warbleton, Sussex, England, Dec. 5, 1889.

Good Location for Bee-Keeping.

I commenced last spring with one colony of bees, and they increased to 5 by natural swarming. I obtained 130 pounds of honey in one-pound sections, and they yet have plenty to winter on. There was not much attention paid to bee-keeping here, until the last year. We have a good locality, I think, and I hope that we shall succeed well. There is an abundance of bloom all through the season; white clover, sweet clover and buckwheat are plentiful here.

F. R. REITER.

Phillips' Station, Nebr., Dec. 16, 1889.

Wet and Cold Season.

The past season here was wet and cold, but there was more honey in the flowers than last year; and on days when the bees could work, they improved them to the utmost. My report is as follows: I commenced the season with 40 colonies, of which 3 were queenless; increased to 58, and took 1,400 pounds of comb honey, and 100 pounds of extracted from unfinished sections. All have a good supply of honey for winter.

J. D. GOODRICH.

East Hardwick, Vt., Dec. 12, 1889.

No Fall Surplus Honey.

I am a poor old soldier, broken down in health, and a bad cripple besides, and get only a small pension. I think that the AMERICAN BEE JOURNAL is the best published. My 32 colonies of bees are packed in chaff on the summer stands, with plenty of honey for winter. Bees got no surplus here the past fall, but there was a good yield from clover and other early flowers, with "bug-juice" mixed in from the beginning to the end; the result is a poor quality of honey, not fit for market, though I sell some of it for what it is, at a low price. This is the first poor honey I have ever got here.

JOHN I. MARTIN.

Falls City, Nebr., Dec. 14, 1889.

Spider Plant, Alfalfa, etc.

I started with 7 colonies last spring, increased them to 14, and then doubled up until I reduced them to 10 colonies, which is as many as I want to keep. Bees had a hard time the forepart of the season—one colony came pretty nearly succumbing, which it would have done, had I not come to their rescue with a little syrup. They supplied themselves the rest of the season, and gave me some honey for my buckwheat cakes.

In regard to the Chapman honey-plant, alfalfa clover and spider-plant, I would say that I had about 100 plants from the seed that I got from Washington, two years ago this winter. The bees just buzzed on it from morning until night. I think that alfalfa is useless; I never saw a bee on it. Spider-plant is as useful for flowers as for honey, and a little more so. It is in bloom from the last of July until frost, and it is quite pretty. There is no honey gathered from it, except early in the morning and late at night. Now and then two or three drops like large dew-drops on a head, can be seen, and on a great many days there are none to be found. The tallest Chapman honey-plant grew 5 feet, or over, in height, and the ball on the stalk is quite handsome. It lasted about three weeks.

Athens, N. Y. TELAH C. WHITING.

Glad to Help the Union.

I had 2 colonies in the spring, and now have 5. I am glad to contribute to the support of the Union, and send my dues with this letter. I think that every man having one colony or more, ought to become identified with the Bee-Keepers' Union, so as to have our industry and pursuit recognized and protected as well as any other pursuit, for it is an honorable one.

ISAAC B. LAING.

Olathe, Kans.

Honey in the Home Market.

I have been in the bee-business for several years, and have usually found it profitable. My report for 1889 is as follows: I increased my apiary from 40 colonies, spring count, to 75 colonies, by natural swarming; produced 3,000 pounds of comb honey, and 200 pounds of extracted honey, nearly all of which is unsold. I sell comb honey in the home market at 16 cents per pound. I have always sold my honey in the home market at remunerative prices, never having shipped a pound to the market center.

J. W. WILLEY.

Lawrence, Kans., Dec. 5, 1889.

Old Colony—Good Honey-Flow.

In my article describing an "old colony," on page 745 of the BEE JOURNAL for 1889, commencing with, "We had a very poor season here," the balance of the article should have been credited to me, instead of Mr. Rosenberger. I would like to hear from the readers of the AMERICAN BEE JOURNAL if any of them know of an older colony of bees.

Bees go into winter quarters with plenty of honey this winter. We had the best flow of honey during the fall, that we have had for years. We hope for good results in wintering, and a good honey season in 1890, as the last four seasons have been rather bad for bees.

J. S. BARB.

Oakfield, O., Dec. 16, 1889.

Golden-Rod and Warm Weather.

I shall order more Almanacs later; just now I have no honey, and consequently I have no need to give to my customers until the spring crop is gathered. Golden-rod here is a good crop for bees in certain seasons, and at others bees gathered but very little from it; this year bees have gathered some surplus, while more than half of my bees just gathered enough to supply them until spring.

We are now having a very warm winter, the mercury being 70 degrees above zero in my store now. I feel uneasy about the warm weather, for if it continues so for a little length of time, our orange trees will soon blossom; then should a frost come, we can say "Good-bye oranges," for next year.

JOHN HAGER, JR.

Arabi, La., Dec. 10, 1889.

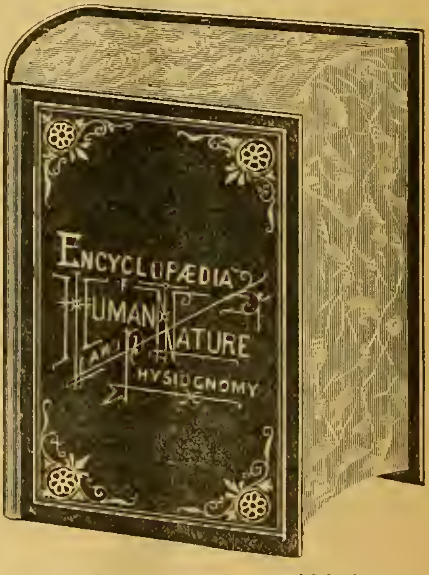
Golden-Rod as a Honey-Plant.

The past season was a poor one for honey in this locality. Everything looked favorable in the forepart of the season for a large yield, as there was a large amount of white clover bloom; but just as the bees were getting to work nicely in the sections, it began to rain, and it not only rained, but it poured, until about the middle of August, so that not only all storing of surplus ceased, but some colonies were nearly destitute of honey in the brood-chamber at that time; when there was a change for the better, and we were favored with about three weeks of warm, dry weather, golden-rod was just coming into bloom, and the bees filled everything full from that source, so that they are in fine condition for wintering. I think that if Mr. Secor could have seen the bees at work, we would have had no doubts about golden-rod being a good honey-plant in this section, at least—though some seasons it does yield very little. The honey is thick, and of a bright-straw color; the flavor is rather pungent, though liked by some.

E. C. BOYD.

Wilmington, Vt., Dec. 12, 1889.

$5.00 Encyclopedia.—The work is almost as large as Webster's Dictionary, 4 inches thick, weighs over 5 pounds, and occupies over 300 cubic inches of space. It is handsomely bound in English cloth, double spring back, gilt side and back stamp, marble edges, beveled boards, and contains over 100 illustrations. It is published at $5.00 per volume, which is very low in comparison with standard current prices on other works.



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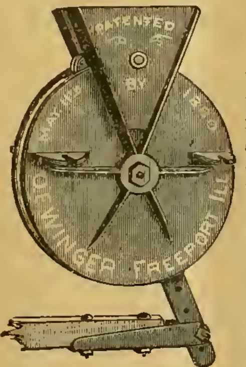

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51D26t 1m1y.

A Seedman's Enterprise.

J. J. H. GREGORY, the well-known seedsman, proposes to distribute free among his customers of this season, a year's subscription to one hundred agricultural publications, to be selected by the fortunate ones from a list to be sent them, which will include all the papers and magazines of this class published in this country. Full details will be found in his catalogue, advertised in our columns. Of course this is an advertising enterprise, but of a character which will permit all to wish well to both the parties concerned. In response to frequently repeated solicitations, he has a likeness of himself in his catalogue of this year.

☞ This week's issue of "Frank Leslie's Illustrated Newspaper" illustrates the method of signaling used in the Squadron of Evolution, the way in which coin-dies are destroyed at the Philadelphia Mint, a visit to the New York Quarantine in the Lower Bay, the lottery mania in New Orleans, and interesting foreign events, while Mrs. Don Cameron is the society lady represented.

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A. I. Root, Medina, O.—44 pages—Apiarian Supplies of all Kinds.

M. H. Hunt, Bell Branch, Mich.—16 pages—Bee-Keepers' Supplies.

D. Landreth & Sons, Philadelphia, Pa.—50 pages—Seeds.

E. H. Cook, Andover, Conn.—44 pages—Newspapers and Magazines.

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The copartnership of ANDREWS & LOCKHART is now DISSOLVED, and the senior partner will give his entire time next season to the breeding of **Carniolan Queens and Bees,** and will sell, after June 1, 1890, Untested Queens at $1.00 each; Tested, $2.00 each; those carried through the winter, at the 15th of May (and are Tested) $2.50 each.
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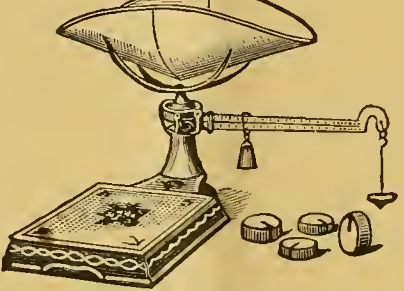

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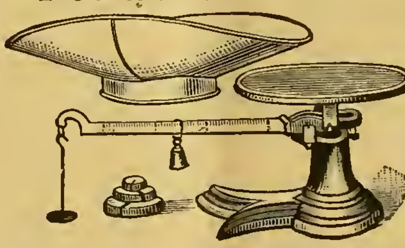

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SCIENTIFIC QUEEN-REARING
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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Jan. 11, 1890. No. 2.

☞ Henry Alley, of Wenham, Mass., writes thus: "No winter here; the temperature on Monday, Dec. 30, at daybreak, was 48 degrees. Bees are wintering well."

◆

☞ We acknowledge with thanks a beautiful mounted card of ferns and shells from the Redondo Beach, California—a New Year's present from our friend T. T. Jones, of Los Angeles, Calif.

◆

☞ C. W. Costellow, Waterboro, Mass., has sent us one of his queen-cages for shipping. It is precisely the same as the one sent us lately by E. L. Pratt, of Marlboro, Mass., and our remarks about that one will apply to this.

◆

☞ Friend George Hilton has had another "queen" added to his stock. By a Fremont, Mich., paper we learn of the fact. It says:

> On Sunday morning Mr. and Mrs. Geo. E. Hilton became the parents of another little one—a girl. Mr. H. has a fondess for articles beginning with the letter B—Bees and Babies. He is one of our most esteemed townsmen.

We are glad to hear that, "by George." Bees and Babies go well together, to show enterprise!

◆

☞ Some flowers have come as usual at New Year's from our friend J. W. Winder, of New Orleans, La. He says that they have only had two frosts there this winter, and that the blossoms are plenty. This year there is not as much difference between the temperature in Chicago and New Orleans as usual. Here the *mud* is nearly ankle deep, and the grass is as green as in spring. We have had no cold weather yet worth mentioning. We hope that spring will not be as backward as the winter has been late in coming.

The Prize Essays on "Extracted Honey," which were called for, have been received, and so that there may be no dissatisfaction, we will here state in detail the methods of awarding the prizes.

The suggestion came from Mr. H. O. Kruschke, and he named the chairman of the Committee who were to examine and award the prizes, and the editor was to appoint the other two members of the committee. This was done, and to secure fairness and prevent any feeling, it was agreed that the names of the Committee should not be stated, and that no member of the Committee should be allowed to compete for the Prizes.

The *modus operandi* adopted was as follows: The eighteen essays sent in for competition were all numbered, and the names of the writers cut off, and corresponding numbers put upon them. On Jan. 1, 1890, they were placed into the hands of one member of the Committee, and the names placed into an envelope, sealed up and put into our office safe.

The first member of the Committee, after reading them all over carefully, was told to select the best three, and write their numbers in the order of his choice on a piece of paper, place it in an envelope, seal it up, and retain it.

The essays were then sent to the second and third members of the Committee, who were instructed to do the same as the first member had done, and return the essays to this office.

As soon as all the members of the Committee have examined and made the selection of the best three, they are to send the sealed envelopes with awards to the BEE JOURNAL to be published. If all do not agree, the majority (two of the three votes) will decide the matter.

We are thus particular, because of the large number of essays, and to prevent any chance of unfairness. The essays are nearly all exceptionally good, and will be published in the BEE JOURNAL as soon as we can find room for them; our readers will therefore have the benefit of their perusal, and of adopting the hints, methods and suggestions therein presented, for next season's operations.

◆

☞ Albert Lindsey, of Macomb, Ills., writes thus:

> Will you please to answer, through the AMERICAN BEE JOURNAL, the following questions? 1. Is 3 feet apart each way, too close for the hives of an apiary to be set, for the bees to do well? Or about what distance should they be placed?
>
> 2. Should there be a space left on top of the brood-frames for the bees to pass over the combs during the winter? Or will it do just as well to place the covering flat down on the frames.

1. Three feet will do, but more space between the hives would be more convenient.

2. Yes, use the Hill's device, and that will give them room to pass over the combs at pleasure.

An Egg-Shell Honey-Package.—Mr. Walter Harmer, of Manistee, Mich., has sent us a novel package containing granulated extracted honey. He describes it as follows:

> I send you a new package of extracted honey, and I hope that it will arrive all right. I had about fifty "factories" running last winter, making the packages, but I sold my poultry last spring. I think that the honey is granulated, as I intended it should be for mailing. If it will interest any one to tell about this package, I shall be only too glad to have contributed something. It will be seen that a needle is large enough to make a hole at the small-end of the egg-shell, and the hole in the other end will need to be as large as a small pea; by running the needle in only far enough to break the inside skin of the egg, the contents can be blown out with the pressure of one's breath.
>
> When the shells are empty, I fill them by means of a glass syringe, and have to be careful not to get any honey on the edge of the shell, or it would prevent the mixture of rosin and beeswax from sticking. The heat of the warm preparation needs to be counteracted in some way, as it causes a little expansion, which would force the honey out through the hot wax.

It certainly is a curiosity, and if not too much labor to prepare it for the market, extracted honey put up in that manner might sell well at fairs, and in drug-stores, at from 5 to 10 cents each. We have seen maple syrup put up in the same way, simply "for fun," however, but the idea might be used to advantage by wide-awake apiarists. The sample sent by Mr. Harmer is placed in the BEE JOURNAL Museum.

◆

A New Bee-Association.—Mr. W. J. Row, of Greensburg, Pa., writes thus:

> The bee-keepers of this county have organized an association to-day (Dec. 27), known as the Bee-Keepers' Association of Westmoreland County, Pennsylvania, with the following officers: President, P. D. Miller, Grapeville; Vice-President, John Kerr, Greensburg; Secretary, W. J. Row, Greensburg; Treasurer, W. F. Geiger, of Beatty. The association starts with bright prospects for the future.

We wish the new association success. Did it vote to affiliate with the International? If not, that was a mistake at the start.

◆

Comprehensive, and yet easily understood, is what Mr. H. J. Rogers, of Stanuard's Corners, N. Y., says of Doolittle's book on "Queen-Rearing," after he had finished reading it. He says:

> It is the most comprehensive work on the subject I have ever seen. Usually, I have to read some sentences over and over again in order to get the meaning; but in this book I can "catch on" at once. I shall try the plan next season.

◆

☞ Mr. R. F. Holtermann, of Romney, Ont., writes thus: "FRIEND NEWMAN:—In sending you my subscription for the HOME JOURNAL, I must say that I find it is not only a pleasure and a profit, but I feel it a duty to support a Journal so free from objectionable matter. In my estimation its tendency is to elevate. Accept my best wishes for success.

GLEAMS OF NEWS.

Hosts of Sweet Ghosts.—No doubt at first thought, many will consider this a rather "haunting" and hobgoblin-like item, judging only from the heading. The definition of the word "ghost" is, "a spirit; an apparition," and when connected with bees, or when a colony of bees are considered as ghosts, then the "spirited" part of the definition may become more than a mere "apparition," it is liable to be quite realistic, especially if the "sweet ghosts" are very closely inspected. We find the item below, in the *Youth's Companion* of recent date. If all ghostly stories would end as "sweetly" as does the following, they might be less objectionable:

> Our house was closed for three years while we were in Europe; and soon after our return, last June, we began to hear mysterious noises. The house was hip-roofed, and the chambers were low, with sloping ceilings. It was in the chambers that we heard the noises.
>
> The sounds varied. Sometimes we heard a low, heavy rumbling like distant thunder; at other times we heard, or seemed to hear, broken murmurs, like hoarse voices in conversation; but usually the noise suggested distant whispering and groanings.
>
> We were not superstitious, but it was not pleasant to have such things going on in the house. For four weeks we sought vainly for an explanation of the mystery. Rats and mice never made such noises, nor bats nor birds. So far as we could think, nothing that flies, nothing that runs, could produce such sounds as came from our haunted chambers.
>
> We had many curious visitors, but pretty soon some of our more ignorant neighbors began to shun the house. The whole affair was greatly exaggerated, of course, and disagreeable rumors were speedily noised about.
>
> This had been going on for about four weeks, when father came into the house one morning, in a state of evident excitement.
>
> "Well, I've solved the mystery!" he exclaimed. "It's bees!"
>
> "Bees!" we cried; "what do you mean?"
>
> "I've seen a thousand bees, at least, going out and in at that small hole in the gable roof," he said. "They've swarmed there, and that explains the whole thing."
>
> We laughed at the idea; but father called a carpenter, and had the small hole in the gable enlarged. The inside of the roof was found to be one immense bee-hive. Over fifty pounds of delicious honey were taken out, and, with the removal of the bees, the mysterious sounds came to an end.

Foul-Broody Hives Used Again.

> The past season was a bad one for me in the bee-business. Foul brood was the cause. Will it be safe to use bee-hives that have had foul brood in them, after scraping, scalding and painting the inside of each hive? Bees are now flying almost every day. J. SEIBOLD.
>
> Homer, Ills., Dec. 23, 1889.

It will probably be quite safe to use the hives so cleansed, but it requires careful and thorough work, and may cost all that they are worth, if your *time* is worth anything.

Honey and Beeswax Recipes.—It should be the endeavor of all producers of honey and beeswax, to discover the various ways in which their products may be employed, and communicate them, thus aiding in the effort to popularize the use of honey and beeswax among their neighbors everywhere. By so doing, apiarists will not only be bestowing a lasting benefit upon their friends and the public in general, but they will be helping to establish avenues that will eventually demand all that their apiaries will be able to produce. We offer the following recipes, that may be useful to our readers:

CHAPPED HANDS.—Take fresh tallow and honey in equal parts, and add one teaspoonful of camphor; warm and stir before using. Keep this in a small tin can for convenience in warming.

COUGH MEDICINE.—Boil one ounce of flaxseed in a pint of water; strain it, and put in an ounce of rock-candy, some honey, and the juice of three lemons; boil it again. This makes a nice, old-fashioned cough medicine. Drink it hot as you can bear it.

GRAFTING-WAX.—The following is recommended as making good grafting-wax: One pound of white resin; ¼ pound of beeswax; linseed oil enough to make good chewing-gum; heat and test a portion by cooling. If it does not break, but sticks, it is all right; if it does break, heat it more.

Honey Almanac.

Its 32 pages are filled with interesting facts, figures and suggestions concerning the uses of Honey for Food, Beverages, Cooking, Medicines, Cosmetics, Vinegar, etc. Also, its effects on the human system are tersely noted; a brief refutation is given of the Wiley lie about manufactured comb honey; a short dissertation sets forth the mission of bees in fertilizing the flowers, and increasing the fruit product. Instead of being an injury to fruit, bees are the fruit-growers' best friends.

Here is what is said of it by those who have seen the Honey Almanac:

> It is satisfactorily proved to me that the Almanacs will do their work in selling honey, judging from the effect it had on a lady in this neighborhood. She had never used honey to any amount before, but after reading the Almanacs she at once ordered 50 pounds of honey from me.—C. Theilmann, Theilmanton, Minn.

Prices:—25 copies for $1.00; 50 copies for $1.50; 100 for $2.50; 500 copies for $10.00; 1,000 copies for $15.00, delivered at the freight or express office here. The bee-keeper's Card will be printed upon the first page, without extra cost, when 25 or more are ordered at one time. Postage, 40 cents per 100 extra. All orders can now be filled as soon as received.

☞ One of our social leaders of St. Louis society, Mrs. Mortimer Taylor, is pictured in "Frank Leslie's Illustrated Newspaper" this week. The paper is full of excellent illustrations. The leading editorial contribution is from the pen of the Hon. Albert D. Shaw, and is on "Sneering at Subsidies."

Golden-Rod and Squaw-Weed.

> In answer to the question, "Do bees gather nectar from golden-rod?" I would say that during the past season, they did, but only a very little, although hundreds of acres were covered with it. There is a plant here that resembles golden-rod, that bees work on as freely as they do on buckwheat. Its stalk and leaves are very much like golden-rod; its blossoms branch out on each side equally, while golden-rod blossoms turn to one side, giving it an arched appearance. Its root is covered with small fibres, about one-half or three-quarters of an inch long, and when it is shaken out, it looks like a cat's tail; while the golden-rod sends out smooth, white roots, about as large as a wheat-straw. Perhaps some have taken it for golden-rod, because its blossoms look so much like it. There is another plant here on the New York side of the Berkshire hills, that is a good honey-plant; it grows from one to two feet high, and the stalks and leaves are covered with a white down. Its blossoms are about three-eighths of an inch wide, and are a pure white, with a brown centre that is covered with pollen. It yields amber honey, that, to my taste, is superior to white clover. Some call it "everlasting" or "squaw-weed." Will the Editor please to give its correct name? ARIEL WELLMAN.
>
> South Berlin, N. Y.

The botanical names of Squaw-weed are *Eucrigeron Philadelphicus*, and *Senecia aureus*. It is an excellent honey-producer.

☞ The Berlin, N. H., *Independent* of last week contains a nice notice of the apiaries of that locality. Of one, mentioned particularly, in Milan, N. H., it says:

> A. D. Ellingwood has one of the largest, and best regulated and equipped apiaries in the State. With some 75 colonies of bees, a house built expressly for their accommodation, and all the modern conveniences and appliances, he will doubtless make a success of his enterprise.

Our Premium-List Supplement describes many articles of great merit, and that are useful in every family. We have carefully selected them to offer as premiums for getting up clubs for our JOURNALS. We do this to *induce* our friends to devote a few hours of labor for us. Our JOURNALS are first-class in their lines, and are needed everywhere. We do not want any one's labor without remuneration, and the articles offered will pay for the labor of getting up clubs, and thus the arrangement will prove to be for our mutual advantage.

Our Clubing List.—We have now made arrangements with publishers of metropolitan Weekly Newspapers, by which we can club them at the very low prices quoted in the **LAST** column, without premiums. The regular price of both is given in the first column. One year's subscription for this JOURNAL must be sent with each order for another paper:

	Price of both.	*Club.*
Chicago Inter-Ocean	$2.00	$1.75
Chicago Times	2.00	1.75
Chicago Globe	2.00	1.75
Chicago News	2.00	1.75
Chicago Herald	2.00	1.75
Philadelphia Practical Farmer	2.00	1.75
New York World	2.00	1.75
Toledo Blade	2.00	1.75

The International.—To the list of Honorary Members, published on page 4, should be added the following :

Mr. Thomas W. Cowan, Horsham, London, Eng.
Prof. William Saunders, Ottawa, Ont., Canada.

The following was the report of the Committee on Exhibits at the Convention held in Brantford, Ont., last month :

Samples of both heavy and light foundation by Chas. Dadant & Son, Hamilton, Ills.

Chaff hives with cover so arranged that the packing may be placed in the cover, and yet fit down closely on the hives, and be lifted off without making a muss of the packing. Shown by W. A. Chrysler, Chatham, Ont. He also showed a super with section supports of inverted M-shaped tins; foundation fasteners, one-piece sections, etc.

E. L. Goold & Co., of Brantford, Ont., showed samples of Dadant foundation, modified Langstroth hive, supers that may be used either for sections or in extracting, perforated zinc, smokers, one-piece sections, and samples of honey-labels.

Joshua Bull, of Seymour, Wis., showed a super for comb honey, with follower at the end and side of the super.

S. Corneil, of Lindsay, Ont., part of a side of a hive made of wired straw.

D. Anguish, of Brantford, Ont., samples granulated and liquid extracted honey, and specimens of several connected combs built upward to the heighth of ten inches.

J. B. Aches, of Poplar Hill, Ont., samples of extracted honey five years old.

James R. Howell, of Brantford, Ont., samples of comb honey, Japanese buckwheat, and raspberries done in honey.

M. Emigh, of Holbrook, Ont., samples of extracted thistle honey extracted in August, 1888, and shows no signs of candying.

Jacob Alpaugh, of St. Thomas, Ont., sample of extracted clover honey.

E. & G. W. Barber, of Hartford, Ont., samples of linden honey and foundation fastener.

James R. Bellamy, of Black Bank, Ont., sample of comb honey from watermint, also extracted honey.

R. L. Mead, of Nassagaweya, Ont., section foundation fastener, and samples of extracted honey.

J. A. Foster, of Tilbury Centre, Ont., collection of beeswax and samples of honey.

R. McKnight, of Owen Sound, Ont., samples of imported bottles of different sizes, for putting up honey for market.

Samples of extracted honey from Ivar S. Young, of Norway.

Moved by R. F. Holtermann, seconded by Mr. Dadant, that the above be printed in the annual report.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.50**, if the order is received at this office before January 31, 1890.

QUERIES and REPLIES.

Getting Sections Filled Flush to the Edges.

Written for the American Bee Journal

Query 679.—Any bee-keeper will observe that the cappings of comb honey in sections is back from the edges of the section a bee-space, leaving the edges daubed with bee-glue (and more wood in view than is desirable), which cannot be cleaned off properly, and without some time and expense. 1. Would it be desirable to obviate this faulty feature, and by the use of a very simple device, have the cappings of the honey come flush with the edges of the section, and with no bee-glue to scrape therefrom ? 2. Can you suggest a plan to accomplish it ?—New York.

1. It would be desirable. 2. No.—M. MAHIN.

1. It would be very nice. 2. I know of no way to secure it.—A. J. COOK.

I do not know that I fully comprehend the gist of this query.—EUGENE SECOR.

It would be desirable, but I cannot suggest a plan.—MRS. L. HARRISON.

1. The perfect capping of comb honey, and the absence of bee-glue are very desirable. 2. Yes.—R. L. TAYLOR.

1. Yes, if not too difficult. 2. No. What do you charge for yours?—C. C. MILLER.

The less propolis we have on the sections, the better.—G. M. DOOLITTLE.

I have had no trouble in the direction mentioned. I feel no want of any new device in that line. It surely would be good for those who are in trouble.—JAS. HEDDON.

I should think so. However, if the cappings should come flush with the outside edge of the section, there is a chance of getting the sealings broken, and the honey to running, when crating it.—J. M. HAMBAUGH.

If you will use the *side-opening* sections, you will have none of the trouble spoken of. You will find the comb flush all around the edges of the section.—H. D. CUTTING.

I have been experimenting to do this, and I think that I have hit on a plan that will generally accomplish it; but my plan requires further trial. 1. It is desirable to have the sections as full and even as possible. 2. Not yet.—C. H. DIBBERN.

1. Yes, it is desirable. 2. Yes, make the secretion of nectar abundant. When Nature "skimps" the product, the gatherers make less provision for storage, and no mechanical ingenuity can devise a remedy, and get it into use soon enough to do any good.—J. M. SHUCK.

1. I think that a plan that would *cause* sections to be filled flush full, would be valuable in many cases. In others, it would not. 2. Who can suggest a plan to do this? Don't all speak at once.—J. E. POND.

Some portions of "New York's" preface are correct, and some not. 1. I should not like to "have the cappings of the honey come flush with the edges of the section;" but I would be glad if there could be some way devised to prevent bee-glue being put on them.—A. B. MASON.

The observation noted is not true of the open-side sections now in use. 1. Yes, it is desirable to have comb honey built in sections in the manner stated, but no device is necessary. 2. The plan to accomplish it is, to use the open-side sections with separators as wide as the section is high.—G. L. TINKER.

We used to make hanging section-frames only ⅞ of an inch wide, but the sections of to-day are an improvement over these, because they can be crated without danger of damaging the comb. The section open on four sides comes the nearest to the end in view, and can be crated as well as the closed-end section.—DADANT & SON.

Has any bee-keeper really observed what you say he will? I have failed to see things as you describe them. When the season is propitious, my sections are nicely filled and sealed out to the wood. If I had some plan by which the bees could be prevented from putting bee-glue between the edges of the sections, and thereby save me the time and labor it takes to scrape the glue from the edges of the sections, I would be pleased to inform the fraternity of my discovery at once.—G. W. DEMAREE.

The propolis is undesirable where it cannot be scraped off, and any plan to prevent its occurrence would be desirable, though we cannot suggest one. Can the querist?—THE EDITOR.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as any story. Price, $1.00.

An edition in strong paper covers is issued for premiums. It will be mailed as a present to any one who will send us *two* new subscribers to either of our JOURNALS.

Postal Notes are no safer to use in letters than bank bills. Any one can get the money on them. A Money Order can be obtained at the post-office or at the express office for 5 cents (only 2 cents more than a Postal Note), and is perfectly safe; if lost it can be re-issued.

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Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

CORRESPONDENCE.

BEE-NOTES.

Interesting Hints and Suggestions for Apiarists.

Written for the American Bee Journal
BY S. L. WATKINS.

"There are no gains without pains,"—so says the bee-keeper.

Chaparall is an excellent honey-and-pollen yielding plant in early spring.

Fair Exhibits.—It pays well to exhibit honey and apiarian supplies at fairs; it is a splendid way to educate the people and help the sale of honey.

Swarming.—Colonies worked for comb honey should not swarm to exceed 10 per cent.; and if for extracted, not more than 5 per cent.

Settling Swarms.—A smoke-pole is quite handy to keep two or more swarms from settling together. You can prevent the others from settling, by the use of the smoke.

Putting on Sections.—Do not put too many sections at one time on a colony; too many has a tendency to *dis*courage, rather than *en*courage.

Extracting Honey.—Beginners in the extracted-honey business had better go slow, and learn the business; or they may produce bad results, and get discouraged.

Hiving Swarms.—To hive a swarm, shake the bees off on a pole, to which a caged queen is fastened. An old sack tied around the end of the pole, gives the bees a better surface to cling to.

Separating Swarms.—In swarming time, if half a dozen or so of swarms get together, dump them on a sheet, catch the queens and divide the bees into as many swarms as you have queens. Fill up the hives with frames of foundation, and place a frame of unsealed brood in each hive, and they are ready for business.

Chloroforming Bees.—Do not experiment with chloroform on your valuable colonies when introducing the queens. An experienced person can introduce a queen in safety with chloroform, but I would advise all bee-keepers to let it severely alone. With a Peet shipping and introducing cage, it is no trouble to introduce queens.

Virgin Queens.—The virgin-queen business will undoubtedly increase in the near future. I believe it is the most practical method of infusing new blood into an apiary. With the new methods of introducing queens, either virgin or fertile queens, it will be no trouble on that part. Bee-keepers who purchase virgin queens will be sure of getting no in-bred queens, and by having choice drones in your apiary, you will soon have a superior strain.

Espercette, or Sanfoin, does well in the mountain countries of California; it grows well without water on the rockiest kind of land. There was not enough of it near my apiary this season to determine its value as a honey-plant, but the bees worked on it first-rate. A bee-keeper in Marin county, Calif., informed me that it is destined to become one of the leading forage and honey-producing plants of the country.

Large Honey-Yields.—Bee-keepers situated in the "Great American Desert," have realized the most money from their apiaries this season. Mr. J. L. Gregg, of Tempe, Maricopa county, Arizona, reports 485 pounds to the colony, and his apiary is composed of something like 200 colonies. The principal source of bloom that it was gathered from, was alfalfa and mesquite. Mr. Ball, of Reno, Nevada, secured 12,000 pounds of comb honey, and 5,000 pounds of extracted honey, all from 200 colonies. His crop was gathered from alfalfa.

Bees and Fruit.—Bees are an advantage to all fruit-growers, by assisting Nature in the fertilization of flowers. A great many people think that bees puncture grapes, but this is a mistake; they work on them after yellow-jackets and other insects, that have strong mandibles, have punctured them. Bees never injure sound fruit.

After grapes and other fruits have bursted, it will soon rot, anyway, and bees might as well have the sweets from it as to let it waste. They believe in "gathering up the fragments," that nothing may be lost.

Floods and Snow.—We are having very stormy weather in California, and if it continues much longer, there will be considerable damage done by floods. A great many bridges along the Sacramento river have been washed away. Several counties bordering on the river are three-fourths under water now; and several feet deep, in some places.

There is about fifteen feet of snow on the summits of the Sierra Nevadas, and it is still snowing.

Strong Colonies.—A good plan to get a large body of bees to work in a hive, is to hive the new swarm that comes out, on frames of foundation, and put it under the old colony, placing a wire-screen between the two. Next, remove all the queen-cells and the queen, in the old hive. Let the wire-screen remain for a week; by that time, if it is an average honey season, the new colony will have things pretty well filled up. You can then venture to put on an empty story, filled with frames of foundation, between the old and the new colony; and, if there is favorable weather, they will commence operations at once.

If any apiarist has a better method of securing a large number of workers in a hive for a honey harvest, than the foregoing, I should be pleased to hear of it.

Placerville, Calif., Dec. 17, 1889.

MICHIGAN.

The Bee-Keepers of the State in Council.

Written for the American Bee Journal
BY H. D. CUTTING.

The Michigan State Bee-Keepers' Association held its 24th annual meeting on Dec. 26 and 27, 1889, at Lansing, in the Capitol building. The attendance was much larger than it has been for several years. The weather was fine, and that, with the cheap rates of railroad fare, caused many more than usual to come. The Hudson House was in a crowded condition, but everything was done for the members to make it more pleasant.

At the close of the meeting a vote of thanks was extended to the Managers of the Hudson House for courtesies shown the members of this Association.

The convention was called to order by the President, Prof. A. J. Cook, in a few genial remarks, that made every one feel at ease.

The minutes of the last meeting, and the report of the Secretary, were read and approved.

Mr. K. Shoshima, of Torsys, Japan, who is a graduate of one of the Agricultural Colleges of Japan, and who is now taking a course in Entomology and Bee-Keeping at the Michigan State Agricultural College, was present, and Dr. Mason moved that he be made an Honorary member of this Association.

Mr. Shoshima says that bee-keeping in Japan is carried on in a very crude manner. The honey is dark, and mostly used for medicine—buckwheat being the principal honey resource. Buckwheat is largely raised and used in Japan, of which they have many varieties.

The Secretary then read the following from G. M. Doolittle, Borodino, N. Y., entitled,

How to Build up Colonies in the Spring for the Honey Harvest.

As an introduction, I wish to say that a bee-convention whose time is all taken up with long essays, is nearly, or quite, a failure; at least they have always been so, as far as I am concerned. I also wish to say that a bee-convention without any essays, is little, if any, better than one that is *all* essays. What do we want, then? Simply some thoughts on several points regarding our pursuit, written by as many different persons, as "starters" for a discussion of these various points. Am I right? If not, let this matter be discussed, and the apiarists in convention show where the above is wrong.

After this introduction, let no one think that I am going to "bore" them with a long essay on building up colonies for the honey harvest. In 1876 and 1877, Mr. J. H. Townly, of Jackson, Mich., pressed upon the bee-keepers of the land the necessity of keeping bees warm as soon as out of winter quarters, by means of some extra protection on the outside of single-walled hives, if we would have our bees build up so as to take advantage of the first honey-flow, recommending that the hives be put in rough boxes somewhat larger than the hives, the space between being filled with chaff or fine straw.

Ten years later, Mr. W. Z. Hutchinson, of the same State, emphasized the matter in his book, "Production of Comb Honey," and I so far agree with them, that I lay down this proposition, viz: No bee-keeper residing north of latitude 40°, can secure the best results in dollars and cents from his bees, unless he so protects them in the spring, whether wintered in the cellar or on the summer stand. Some say that the cost of so protecting them is more than the gain amounts to. What says this convention?

Prof. A. J. Cook, and others, say that in addition to all other favorable circumstances, bees must be fed, by way of stimulative feeding, at all times when they are not gathering honey, in order to build colonies up rapidly in the spring; for in proportion to the number of days that sweets are carried, so will the brood make a gain over what it would if no sweets were carried.

Without contradicting the above statement, I wish to say that the daily feeding of colonies is a task that most bee-keepers do not relish, and for this reason it is to be avoided, if possible. That it may be avoided, I make this statement: Bees having a large supply of honey in their hives, will build up just as fast without any stimulative feeding, as will a colony having little or no stores, under daily feeding; and if the full combs of honey are placed on one side of a divison-board, and the brood on the other, so that the bees have to carry their food around this board, they will build up faster than they will in either of the other cases. Can any one disprove it? If not, it stands a fact.

Some say that in the foregoing we have all that is necessary, and that further "fussing" is time worse than wasted; but I say that when any colony becomes strong enough to have brood in five combs, so that these combs average two-thirds full, a gain is to be made which will much more than pay for the time employed, by reversing the brood-nest, regardless of the style of the hive or frame used.

By reversing the brood-nest, I mean the putting of the center combs, which are full of brood, on the outside; and putting those having the least brood, that were on the outside, in the centre. Now leave them until the hive is so well filled with bees that they have brood in all but the two outside combs (the centre combs being filled out to the frame on all sides), when the brood is to be reversed again, putting the combs that are entirely filled with brood, out next to these outside combs, and those having the least in them, in the center. A gain of a week, at least, is made in this way to each hive, and this week of honey-gathering will more than pay for the necessary trouble and time. If this is not true, give us the reason why.

In these three items, we have the main points used in building up colonies, where the bee-keeper desires to work all the colonies that his apiary contains. If he has more colonies than he cares for, a great gain is made by shutting all colonies that are not up to the full standard of strength, on one-half of the combs that each hive contains, and when these combs are perfectly filled with brood, unite two of them, by putting combs, bees and all into one hive, leaving the queen of one of them and the few bees which adhere to the sides of the hive, in the other hive, to form a nucleus. If they are given an empty comb, or one having some honey in it, and an empty frame, you will soon have a two-frame nucleus that will be a source of comfort.

The united colony will be ready for the sections at once, and when they swarm, if they do, all you have to do is to shake all the bees off the combs of brood, putting empty frames in their places, or frames of comb foundation; and carry the brood to the nucleus, thus giving you the full working-force on the old stand, and two good colonies in the fall.

The half-depth chambers work very handily in using the foregoing plan, as they can be used singly until the time of uniting, and then one put on top of the other, in uniting. If no one has tried this plan, he will be astonished at the results which can be obtained.

All the foregoing is for a locality where white clover, or an early crop of honey is to be worked for. If buckwheat or fall flowers are to give the crop of honey, then the bees will build up in time, of their own accord, and the only thing the apiarist has to look after, is to see that they have plenty of stores at all times.

G. M. DOOLITTLE.

Geo. E. Hilton strongly advocated the use of double-walled hives, and the equalization of brood from one hive to another. Some did not think it best to disturb the brood in the spring, while others thought the changing of brood from centre to outside was beneficial, but dangerous unless the hive was protected by an outer case filled with straw, leaves, sawdust, or other material.

On a vote being taken, a large majority voted in favor of single-walled hives, with outer case, packed in the spring. A. I. Root, M. H. Hunt and several others were in favor of chaff-packed hives, the entire year.

Dr. A. B. Mason was in full accord with Mr. Doolittle, and strongly advocated spring protection.

W. Z. Hutchinson did not believe it best to disturb the brood at all.

A. I. Root would caution all novices in spreading brood. He had never, by practical tests, seen any benefit from it.

M. H. Hunt had seen great benefit from spreading the brood.

Prof. Cook asked different ones, if they were to start an apiary, what kind of hive they would use.

H. D. Cutting would use a simple, plain Langstroth hive, single wall, with loose bottom-board.

W. Z. Hutchinson would use the same, but wanted spring protection.

Dr. A. B. Mason would start with chaff hives, and use them the entire year.

W. D. Soper had taken nearly all of his bees out of the chaff hives and placed them in the cellar.

Geo. E. Hilton explained how he placed his bees in clamps; he had 100 colonies so protected. His out apiary had done much better than the home apiary. The pasturage was much better than the bees had at home.

On a vote being taken, all were in favor of ample stores in the spring.

Prof. Cook gave the essay of Mr. Doolittle great praise. It certainly received the greatest discussion of any essay, with great interest to all.

The question-box was then opened by President Cook, as follows :

PLACES TO WINTER BEES.

"Is it detrimental to health, to keep bees in the cellar under a living-room ?" Messrs. R. L. Taylor, Mason, Cook, Hilton, and others discussed the question. If the cellar is kept clean, and all dead bees swept up, there is no danger.

"Is a solid stone-wall house built above ground, a good place to put bees for winter ?"

Geo. E. Hilton, who is a practical stone-mason, gave some excellent advice about putting up such buildings. He considered a solid stone wall the poorest of all—frost would go through a solid stone wall over four feet thick.

"Can bee-keeping be made to pay, one year with another ?"

M. H. Hunt said that it always pays him. R. L. Taylor said that it paid him, when he secured a crop of honey.

The convention then adjourned until 1:30 p.m.

AFTERNOON SESSION.

The convention was called to order with President Cook in the chair, and the question-box was resumed.

FINDING QUEENS—EXCLUDERS.

"What is the best method of finding queens ?"

R. L. Taylor gave his method as follows : Smoke the entrance, rap on the back of the hive, remove the sections quickly, then remove the honey-board, and you will find the queen on the honey-board, nearly every time.

"Does the 'excluder' exclude ?"

A. I. Root said that they make three sizes of zinc, and has calls for all three sizes. The larger size will exclude drones, but not queens ; the second size, drones and many queens ; and the third size excludes any queens, and some other bees.

W. Z. Hutchinson said that 5-32 of an inch will exclude any queen.

BOTTOM-BOARDS — EQUALIZING BROOD.

"Are loose bottom-boards desirable ?" A. I. Root said "Yes and no." Messrs. Taylor, Hutchinson, Cutting, Mason, Gordon, Soper and many others said, "Yes."

"Is it best to take brood from one colony, to help another ?"

Mr. Hilton thought that it is best to do so to equalize.

Dr. Higbie thought that he had saved a good many queens by so doing.

A. I. Root thought that we cripple the colony by taking brood from it.

Dr. Mason said that he has injured strong colonies by so doing, but thinks that locality has much to do with it.

WAX FOR COMB FOUNDATION.

"Which is to be preferred, white or yellow wax for making comb foundation ?"

R. L. Taylor thought that the yellow is best, if it is clear and soft.

M. H. Hunt prefers yellow wax. A. I. Root had seen nice, white wax from the South.

MARKETING THE HONEY CROP.

"How can we best sell our honey ?"

Mr. Hilton put it up as the market demanded, and cultivated a home market.

Mr. Fellows advocated the home market.

Mr. Gordon sold from 6,000 to 7,000 pounds, at 6 to 8 cents per pound, selling 6 to 8 gallons at one time.

Dr. Mason said that a firm in Toledo sold from house to house, over 40 barrels of honey, receiving $1.00 for 6 pounds. They are the Moore Bros.

W. D. Soper said that 2-quart pails sell the best in the market in Jackson, Mich.

A. I. Root described the method of procedure of the Moore Bros. One brother and sister went ahead with samples, and when sales were made, took the numbers of the houses and the names of the families, requesting them to have the money all ready when the delivery cart came around. The names and amounts wanted were given to the other brother, who followed with a hand-cart, and delivered. The honey was in Mason glass jars. After they canvas one city, they go to another.

W. Z. Hutchinson said that he can do better to sell direct to commission men.

Dr. Higbie recommends all who peddle, to take both comb and extracted honey. He has sold 100 pounds per day in that way.

GROWING ALSIKE CLOVER.

M. H. Hunt was called upon, and gave much information about Alsike clover. He had raised it for twelve years, and said that more seed can be obtained from it than from red clover. For hay, he sowed 2 pounds of Alsike with the same amount of timothy ; it ripens at the same time, and does the best on rich, moist soil—dry soil is "no good." For seed, he sowed on summer-fallow, clear of weeds. The seed he got from the second cutting. It did not do well with red clover, as the red crowded it out. Cattle are very fond of it, and crop it close to the ground. It will not heave in winter. It will grow four feet long, and cattle and sheep will eat every particle of it.

President Cook thought that 2 pounds of Alsike and 4 pounds of red clover seed would be best to sow for farmers to pasture. Alsike will run for 5 to 6 years, while the red will last but 2 years.

Mr Gordon reported a yield of honey amounting to 1,300 pounds from a field of Alsike, while no other honey was gathered in the county. Red clover will not do well on low, moist ground.

The following essay by H. D. Cutting was then read by the Secretary, on the

Preservation of Our Basswood Timber.

Mr. President, Ladies and Gentlemen :

I think that the time has come when this, the oldest Bee-Keepers' Association in this country, should take some action in regard to the preservation of our "lindens," commonly known as basswood. I think that it is generally conceded by all bee-keepers, that basswood is the leading source of honey in the great majority of States. The distruction of this timber is more than many of you realize. At the present rapid rate of destruction, it will be but a few years when basswood honey will be at a premium.

I see that many report that basswood has already failed in localities where but a few years ago it yielded great quantities of nectar. As you all know, basswood timber is largely consumed in the manufacture of hives, cases, sections, separators, etc.

I am opposed to the use of basswood for sections, for several reasons. It is like "killing the goose that lays the golden egg." Every tree that is cut for the use of sections, takes just that much from the honey-crop for years to come. The only thing of any account in favor of basswood for sections is, that it will make the "one-piece section." We have other timber just as good—yes, much better than basswood for this purpose.

Poplar is much nicer and as cheap. It is finer grained, harder, and will not soil as readily as basswood. Spruce also makes a beautiful section. I am greatly in favor of the four-piece section, and when well made it is a much better section than any one-piece section. I challenge any one to make one-piece basswood sections as fine as the samples of four-piece sections on exhibition here to-day. Afer using the side-opening section for several years, I am convinced of its superiority over the old style. I can get honey in much finer condition, with no bulging or projections.

Many prefer the one-piece to the four-piece sections because they are the more readily put together; but with the simple machines now on the market, for putting sections together, the work is nothing compared with what it was. I have one machine that cost only one dollar, and my little boy, six years old, thinks it "just fun" to put the four-piece sections up, ready for the foundation.

I also find by actual experience that poplar or whitewood makes a much finer separator than basswood, and I have never seen a case where the separator was torn down; but with basswood, I often find them entirely spoiled for future use, like the sample here shown.

The supply is governed by the demand. If there is no demand for basswood sections and separators, there will be none made, but manufacturers will turn their attention to supplying the wants of their customers, with a material not detrimental to their business.
H. D. CUTTING.

The essay was followed by the reading of letters from H. R. Boardman, of East Townsend, Ohio, and E. A. Manum, of Bristol, Vt., strongly condemning the destruction of the basswood. Mr. Manum recommends the four-piece sections made of poplar, as the best sections now in use.

The matter was discussed by A. I. Root, M. H. Hunt, Geo. E. Hilton, and others.

A. I. Root said that they had made one-piece sections from poplar. He thought that the open-side sections were a good thing, and the samples on exhibition filled with honey, carried great weight. He said that the half-pound sections did not sell; the one-pound sections were the best.

A vote was taken on the subject, and the majority were in favor of the one-piece sections, yet the largest honey-producers present were in favor of the four-piece, poplar section.

R. L. Taylor was very much in favor of the four-piece sections; he, as well as several others, claimed that they could put them up for less money than the one-piece; there was no waste; he gets his sections put up for 5 cents per one hundred.

FULL SHEETS VS. STARTERS IN SECTIONS.

"Is it best to fill sections with foundation, or only use a small starter?" was asked. After discussing this question, a vote was taken, which resulted in a large majority voting in favor of filling the sections.

M. H. Hunt showed some very fine foundation, extra thin, made on the new, flat-bottom mill.

The Secretary showed a number of sections filled with comb, built in 1888, and filled with honey in 1889, and to all appearance, just as nice as newly-made comb. On a vote being taken, the majority were in favor of using such combs, if in good condition, clean and bright.

SEPARATORS VS. SEPARATORS.

The President called on R. L. Taylor to support the negative, and H. D. Cutting for affirmative.

After quite a discussion, a vote was taken, and a large majority were in favor of separators.

EVENING SESSION.

The Association were invited to hold the balance of their meetings in the Senate Chamber. President Cook occupied the Speaker's desk, with Senator R. L. Taylor at his old desk.

President O. Clute, of the State Agricultural College, and author of "Blessed Bees," being present, President Cook called on him for a few remarks, after which the President read his annual address, combined with the "Different Varieties of Bees."

[This will appear in a future issue.—ED.]

A. I. Root gave his experience with the Carniolan bees, but thought that he had never had good Carniolans.

W. Z. Hutchinson said that his Carniolans compared very favorably with Italians, and much better than the blacks, and finished their work in fine condition.

Prof. Cook thinks that the combination of Carniolan and Syrian bees will make a grand cross.

H. D. Cutting said he had Carniolans for several years, and was well pleased with them. They were the first to swarm, but were not excessive swarmers—no more so than Italians. He gave them plenty of room, and they gathered honey rapidly, and it made a fine appearance.

R. L. Taylor followed with a well-written essay on "Foul Brood."

[This will appear in a future issue.—ED.]

This matter was discussed at length by President Clute, Prof. Cook, Dr. Mason, A. I. Root, W. D. Soper, and others.

Mr. Taylor explained at length the appearance of dead brood and bees found in the front of the hive. He thought it also affected mature bees.

THE SECOND DAY.

MORNING SESSION.

The convention opened with President Cook in the chair.

BEE-KEEPING WITH OTHER PURSUITS.

"What vocation will help bee-keeping in a poor season?" was asked.

Prof. Cook called on nearly all the members present for their views. The greater number advocated general farming.

Mr. Boyden gave one-half the increase to his boys, which interested them, and made the work light all around.

Mr. Barnes bought furs and kept poultry, and thought that poultry pays well with bee-keeping.

L. C. Woodman, of Grand Rapids, an extensive fruit-grower and bee-keeper, gave a discription of his fruit-farm and manner of caring for his bees. He had 70 acres in fruit, 10 acres in raspberries, and raised large quantities of currants, gooseberries, peaches and apples. The fruit paid the best outside of the bees. Raspberries and peaches paid well; yet for the amount of capital invested, the bees paid the best of all.

QUEEN-TRAPS—COMMON OR FLAT-BASE FOUNDATION.

"Are queen-traps a success?"

R. L. Taylor said they were a great help to him.

"Which is best, common or flat-base foundation for sections?"

M. H. Hunt spoke very highly of the flat-base foundation. W. Z. Hutchinson had used it, and was well pleased with it. He said that the bees, in changing the base, made it very thin, like natural comb.

Some thought that the wax was much harder than the common, and did not work as readily.

President Cook said that we should not condemn any foundation on a first trial, as wax differs greatly in quality.

JAPANESE BUCKWHEAT.

President Cook then called on A. I. Root to tell the Convention about "Japanese buckwheat." He said that it was much better than the common and silver-hull, as they were uncertain for crops of honey and grain. Alsike clover and Japanese buckwheat are the best for honey. He thinks that it is best to drop all other kinds of buckwheat, and adopt the Japanese, as it is so much better.

President Cook said that the Japanese variety at the College had done splendidly, while the common and silver-hull had done nothing. One of the Lansing millers thought it yielded the best of any buckwheat. Some millers found it difficult to grind, as they were not prepared to handle it.

Dr. Mason said that it had done splendidly in his locality.

TEMPERATURE OF BEE-CELLARS.

"What is the proper temperature for bee-cellars?"

Dr. Mason wanted it at 50°; nothing below that. He leaves off the bottom-boards, which will account for such a high temperature.

H. D. Cutting wanted it from 38° to 45°; a low temperature requires a dry cellar.

On a vote being taken, the majority were in favor of 40° to 45°.

The selection of the location for the next meeting being in order, R. L. Taylor moved, and the motion was carried, that we meet in Detroit, on Jan. 1 and 2, 1891, as at that time the members would be sure of reduced rates on all railroads. As this will be the 25th anniversary of this Association, it is expected that the meeting will be the largest ever held by the Association.

The election of officers by ballot resulted as follows: President, A. J. Cook; 1st Vice-President, M. H. Hunt; 2d Vice-President, W. Z. Hutchinson; 3rd Vice-President, W. R. Fellows; Secretary, H. D. Cutting; Treasurer, H. E. Gordon; and Assistant Secretary, Geo. E. Hilton.

A discussion of the revised premium list occupied the balance of the forenoon.

AFTERNOON SESSION.

The discussion of the premium list was resumed, when it was adopted with the several changes and additions, and the Secretary was authorized to send a copy of the list to all societies in the State, and any others who request the same. It is as follows:

Exhibitors will not be allowed to remove honey from the exhibit during the fair, but may sell from a reserved supply.

In judging bees, purity of race shall constitute the competing points.

Bees must not be allowed to fly during hours of exhibition.

Bees must be exhibited in such shape that each comb may be seen on both sides.

	1st	2d	3d
Most attractive display of comb honey	$35	$20	$10
Specimen of comb honey, not less than 20 lbs., quality and manner of putting up for market to be considered	10	5	
Most attractive display of extracted honey	35	20	10
Specimen of extracted honey, not less than 20 lbs., quality and manner of putting up for market to be considered	10	5	
Display of comb honey by a lady	20	10	
Display of extracted honey by a lady	20	10	
Most attractive display of beeswax	20	10	
Specimen of beeswax, not less than 10 lbs., soft, bright yellow wax to be given the preference	6	3	
Single-comb Nucleus Italian bees	10	5	
Single-comb Nucleus black bees	10	5	
Single-comb Nucleus Syrian bees	10	5	
Single-comb Nucleus Carniolan bees	10	5	
SWEEPSTAKES ON BEES.			
Display, in single-comb Nuclei, of the greatest variety of the different races of bees	10	5	
Assortment of honey-candies, quality to govern	6	4	
Assortment of fruits preserved in honey, quality to govern	6	4	
Display of pastry made with honey	6	4	
Honey Vinegar, not less than one gallon, shown in glass	6	3	
Specimen of Comb Foundation for use in the brood-chamber	6	3	
Specimen of Comb Foundation for use in section-boxes	6	3	
Comb Foundation, for use in the brood-chamber, made on the grounds	20	10	
Comb Foundation, for use in section-boxes, made on the grounds	20	10	
SWEEPSTAKES.			
The largest, best, most interesting, attractive and instructive exhibition in this department, all things considered	35	20	10

It was voted that Dr. A. B. Mason be selected as superintendent of the bee and honey department at the World's Fair, in 1892.

Geo. E. Hilton then read the following essay, on

Can the Average Farmer Make Bee-Keeping Pay?

Had our worthy Secretary asked the question, "Will it pay the majority of farmers to keep bees?" I should answer, "No." But assuming that the majority of farmers are partially composed of the "average farmer," then the assertion should be qualified.

The farmer who "can't afford" comfortable quarters for his stock, and can only afford to have wood enough ahead to last over night, and who sits around the cook-stove during these long winter evenings, his knees forming a rest for his elbows, and his hands for his chin—who "can't afford" to take a paper, or furnish a lamp to read it by (should his more enterprising neighbor lend him one)—the farmer who "can't afford" to have a stove and a good lamp in his best room, where his children can invite their mates and spend their evenings in pleasure and profit, but who can afford to see them go to the "Center" every night, and see the marks of dissipation become more plain on their fair faces daily, but who enjoy hearing their neighbors' say, "The carpet in their best room looks as good as new," when the facts are, it was bought twenty years ago—my friends, there are such localities, and where the majority of farmers are comfortably well off, and are considered the average, or a little above the average farmer—in these localities it will not pay the average farmer to keep bees. It is very gratifying, however, to observe that these localities are growing beautifully less.

In other localities, where the "average farmer" comprises those who by thrift, energy and enterprise, have good provisions for their families and stock, who make the most of everything, and know how to market their products to the best advantage, being posted through the mediumship of the best periodicals representing his industries — these farmers, should they have the natural inclination, will make bee-keeping pay, for the reason that they will give it the same proportionate attention that they give their other rural industries. Instead of sitting around the cook-stove, and complaining of the hard times, and the bad laws that hamper them and destroy their bright, intelligent boys that they have been hoping would in the near future relieve them of some of their imaginary hardships, they are just taking comfort, making bee-hives, and getting everything in readiness for the coming busy season.

Bee-keeping has passed its "luck period," and is now and established science. But still the past three seasons have proven that it is not the specialist that has produced the honey, or made the best margins on what he did produce. My 250 colonies in two yards have not averaged to exceed 16 pounds each, but have required about the same attention that they would, had they produced 60 pounds each—as those not to exceed five miles away did with about the same pasturage, but only four or five in a place. With a good season, of course the scales would be turned.

But many of us are feeling that these good seasons are the exception and not the rule. Bee-keeping is a rural industry, and with the intelligent, wide-awake farmer it belongs, and with it he will succeed. If this is the "average farmer," then it will pay him to keep bees; but if, on the other hand, he belongs to the class first described, bee-keeping, like everything else he does, will not pay.

GEO. E. HILTON.

It was voted that our thanks be extended to the President and Secretary for their kindness and extra work in making this the most successful meeting held by this Association for many years.

The Committee on Exhibits reported as follows:

M. H. Hunt, of Bell Branch, Mich., exhibited some very fine flat-bottomed foundation of his own manufacture; foundation for brood; nice one-piece sections, and Alsike clover seed.

H. D. Cutting, of Clinton, Mich., exhibited extracted red-clover honey, and comb honey; with a sample of honey-candy.

Dr. G. L. Tinker, of New Philadelphia, Ohio, exhibited samples of four-piece sections, and wood separators.

E. L. Pratt, of Marlboro, Mass., exhibited queen-cages.

W. D. Soper, of Jackson, Mich., exhibited smart-weed comb honey; horse-mint, basswood, and Alsike extracted honey.

Jacob E. Timpe, of Grand Ledge, Mich., exhibited a brood-frame holding six one-pound sections, with removable bottom-bar held by hooks.

Geo. E. Hilton, of Fremont, Mich., showed a T super, so modified that it deserves the name of "Hilton's Improved T Super." The sections and separators are held in place by set-screws.

There was also on exhibition a large amount of good, sound sense and solid enjoyment, with a fair share of mirth, which has usually been as much enjoyed by those introducing it, as those indulging in it; and the amount of ignorance shown has been marked by its absence.—*Committee, A. B. Mason, Geo. E. Hilton, W. D. Soper.*

The convention then adjourned to meet in Detroit, Mich., on Jan. 1 and 2, 1891. H. D. CUTTING, *Sec.*

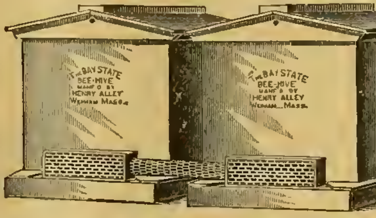
SWARM-HIVER.

Novel Self-Hiving Arrangement for Bees.

Written for the American Bee Journal
BY HENRY ALLEY.

Some few weeks since I saw a notice in the AMERICAN BEE JOURNAL that some one had devised an arrangement by which a swarm of bees, when they issued, would hive themselves; but the inventor, before he could describe and illustrate it, first wanted the bee-keepers to raise $1,000 to pay for the illustration.

Well, I was then not quite ready to bring before the bee-keeping public the device which is here illustrated and described. The arrangement is shown at the entrance of two bee-hives; if the upper-chamber of the drone-trap is removed from two traps, and one each placed at the entrance of two bee-hives, and the two traps are connected by a passage-way formed by a tube made of perforated metal, one may get a good idea of this new device for hiving bees when they swarm.



The Self-Hiving Arrangement.

The empty hive is placed at the side of the hive whose colony is expected to swarm, and the "swarmer" fixed in position as shown in the accompanying illustration. When once in place, the bee-master can go about his business, whether fifty miles away or near the apiary; and he can rest assured that, should the bees swarm during his absence, they will be self-hived, and all settled to work upon his return.

When a swarm issues, the queen will be conducted to the new hive; the bees miss her, and, as is perfectly natural, will find her in the new hive, and readily join her. Should any bees, on their return, enter the home hive, they would gradually join the swarm in the new home. Does this last statement need confirming? Let me see if I cannot show that bees will do just as represented in the foregoing statement:

How many of us have known bees to swarm, and, losing their queen on the ground, return to the home hive? After awhile the queen would crawl up under the bottom-board of the hive, when the bees would join her, and at once commence to build comb there. I saw this very thing in May, 1889, in the apiary of Mr. L. E. Burnham, of Essex, Mass.

When the bees have found the queen, not one of them will enter the the old home again.

I believe that this invention completes the last thing needed to make bee-keeping a success under nearly all conditions. The small bee-keeper, and all those who have business to take them away from home during the day, need not fear of losing their swarms, as each one when it issues will hive itself without the aid of any person.

The cost of the arrangement is about the same as one drone-trap. A patent has been applied for on it.

INCREASE.

Trying the Methods for the Prevention of Increase.

Written for the American Bee Journal
BY J. C. STEWART.

As I have all the bees I want, I hailed with expectation a method that would give larger colonies, and effectually control increase. This was claimed for one plan, by Eastern men, namely, to take away the queen, and in ten days cut off the cells; then do the same in six days more, and release the queen, or introduce a virgin queen.

I had 14 colonies in one row, and when swarming began, I took queen-cages and caught the 14 queens and caged them, hanging the cages between two frames. What was my surprise, on opening the hives ten days later, to find six of these queens dead. In eight more hives I took a frame of brood and bees with the queen and placed them in a nucleus hive beside the old one; then in six days I returned the frame, queen and all. This last plan I liked best.

It produced powerful colonies, and all were storing in the sections, but in a few days one-half of them were hanging outside the hive, and refused to work; and they kept loafing worse, utterly stopping work in the surplus sections. But I tried every way that I knew. I gave some, virgin queens after 10 or 15 days, and a few were retained, but most of them were killed after awhile, when I would look, expecting to find a laying queen and found none. Such a colony, with no brood or queen, did no work in the sections.

I found it hard to introduce any kind of a queen in some hives. Those that received a queen did well in the sections, and perhaps if I had taken more pains in introducing, all would have worked well. Some colonies treated in the same way last year, did splendidly. If it was not for the expense of new hives, I should say, better let them swarm. There is three times the work about it that there is in hiving swarms. I am uncertain about the plan!

Hopkins, Mo.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The Indiana State Bee-Keepers' Association, will hold its tenth annual meeting at Indianapolis, Ind., on Wednesday, Jan. 15, 1890, at 1 p.m. All bee-keepers are cordially invited.
GEO. C. THOMPSON, *Sec.*, Southport, Ind.

☞ The twelfth annual meeting of the Nebraska State Bee-Keepers' Association, will be held in the Lecture Room of Nebraska Hall of the State University, at Lincoln, Neb., on Jan. 15, 16 and 17, 1890. Every bee-keeper and lover of honey is invited to meet with us. The Horticultural Association meets at Lincoln at the same time, and arrangements are now being perfected to hold joint sessions.
J. N. HEATER, *Sec.*, Columbus, Neb.

☞ The annual meeting of the Colorado State Bee-Keepers' Association, will be held in the Chamber of Commerce building, in Denver, Colo., on the third Monday in January, 1890, for the election of officers and other business. Everybody is invited to attend. E. MILLESON, *Pres.*

☞ The Eastern New York Bee-Keepers' Association, will meet in Convention, Jan. 20 and 21, 1890, in Agricultural Hall, Albany, N. Y., at 10 a.m. All interested in bee-keeping are cordially invited to attend. The Farmers' Institute is held at the same place on Jan. 22 and 23, 1890.
W. S. WARD, *Sec.*, Fuller's Station, N. Y.

☞ The 21st annual meeting of the New York State Bee-Keepers' Association will be held in the Court House at Rochester, N. Y., on Feb. 5, 6, and 7, 1890. Reduced rates will be given at hotels and on all principal railroads. The programme and full particulars will appear in due time. Each county association is requested to send two or more delegates. G. H. KNICKERBOCKER, *Sec.*

☞ The annual meeting of the Vermont State Bee-Keepers' Association, will be held at Burlington, Vt., on Jan. 21 and 22, 1890. Excellent hall accommodations have been secured at the VanNess house. The Central Vermont Railroad has granted round-trip tickets from the following places: Rutland, White River Junction, Cambridge Junction, Richford via St. Albans, Ticonderoga, and all intermediate points, to Burlington and return for fare one way. A good meeting is expected, and all are invited. For further information and programmes, apply to the Secretary,
J. H. LARRABEE, Larrabee's Point Vt.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Jan. 15.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 15-17.—Nebraska State, at Lincoln, Nebr.
J. N. Heater, Sec., Columbus, Nebr.

Jan. 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Denver, Colo.

Jan. 20, 21.—Eastern New York, at Albany, N. Y.
W. S. Ward, Sec., Fuller's Station, N. Y.

Jan. 22.—Vermont State, at Burlington, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Feb. 5-7.—New York State, at Rochester, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Japanese Buckwheat and Bees.

In the fall of 1888 I put 61 colonies into the cellar, and had 56 colonies in working condition on June 1, 1889; I then sold 2, leaving 54. My honey crop was 1,400 pounds of comb, and 5,800 pounds of extracted honey, with an increase of 27 colonies. I had 4 acres of Japanese buckwheat within 40 rods of my apiary, which yielded 160 bushels of clean seed. Did the nearness and amount of bees increase the yield?

Ionia, Iowa. Geo. H. Potter.

They Paid for their Keeping.

For the last four seasons I have kept only one or two colonies of bees as pets. Last season I had 5 colonies, and in November, 1889, I had 13 colonies, which produced 724 pounds of extra-fine comb honey, and 613 pounds of extracted, which was mostly from clover and basswood, making a little over 102 pounds per colony, fall count; and a little over 267 pounds per colony, spring count. Owing to business engagements, I lost at least 200 pounds of honey, by not being able to attend to the extracting when it should have been done; still my pets paid for their keeping.

H. N. Rogers, M. D.

Chippewa Falls, Wis.

Bees May Not Winter so Well.

My report for the season just past is as follows: I commenced with 82 colonies, increased to 155, and took 2,500 pounds of comb honey, and 2,100 pounds of extracted. The forepart of the season was very unfavorable—bees had to be well taken care of, and fed until into June. I do not think that they will winter as well as usual, on account of the honey-dew in their hives; the young colonies are all right, but the old colonies, with the young queens, will be the ones to suffer. I placed 116 colonies into the cellar on Nov. 28, and put 6 more into the cellar that had been out until yesterday; those had a flight on last Sunday. We have had very open weather so far since Thanksgiving, plowing being done every day until yesterday. I hope for a good season in 1890.

W. Addenbrooke.

North Prairie, Wis., Dec. 21, 1889.

Effect of Honey on the Skin.

The attention of the public is being called, as never before, to the variegated uses of honey. That it is pleasant and healthful food has been known ever since the first man broke honey and the honey-comb. That was a long time ago. It has one use, however, which I do not remember to have seen in print. A few years since, a lady desiring to make a creditable appearance in society, found it necessary to use cosmetics on her arms. Her face was all right, needing neither paint nor soap; but her arms were terrible—rough, with pimples that had come to stay. The work was done faithfully, but in vain, and after three weeks it was a bad job. Intending to perpetrate a "scientific pleasautry," I said, "Why don't you put on honey?" Sure enough, she put on the honey, rubbing it in thoroughly, with just enough water to make it work. This was left on over night, and washed off in the morning. Two applications removed the pimples, and left the skin delicate and smooth—not bleached with acid, but with the beautiful surface of health.

E. Strong.

Kalamazoo, Mich.

Only Half a Crop of Honey.

My bees did very well, but I had only half a crop of nice honey this year. I have most of my bees in the cellar, and are all right. I keep some in separate chaff houses, made after my own notions, and they do well in most of the winters. I do not put "all my eggs in one basket." The cellar, for me, is the surest, year after year. Winter commenced early, but there is little snow now, and no sleighing yet.

J. E. Breed.

Embarrass, Wis., Dec. 17, 1889.

Alfalfa and Golden-Rod.

I vote for the golden-rod for the national flower, though it produces no honey for me. I have noticed carefully for a good many years, and have never seen but one bee on it, and that looked as if it was lost. It is frequently covered with an ugly, black beetle. I had a small patch of alfalfa clover for five years, and never saw a bee on it, though my bees were within a hundred yards of it. I notice that some recommend it for bees, but it is worthless for honey in this part of the country, and not profitable for anything.

A. J. Duncan.

Hartford, Iowa.

Old Ideas—A Poor Season,

I do not remember of ever hearing it hinted that the drones laid the eggs, until the past fall, when an old lady came to visit us. She was between 80 and 90 years old, and had been a bee-keeper in her younger days, or owned bees. She took a great deal of interest in my Italians, and gave me instructions in regard to bees and the new-fangled ways. She *knew* that the drones laid the eggs, and that if the king died, the bees would do no good, etc.

My bees did very well through the past summer, but in the fall they did not do so well. They swarmed on July 21 for the first time, instead of May or June, as it should have been. The queen did not come out, so they returned, and came out on July 23. I lost two old queens, and secured just five new swarms from two old colonies; the other two did not swarm, that I know of. I put 9 colonies into the cellar about the middle of November; 3 or 4 colonies were very light, and 2 or 3 very heavy. I took off 120 pounds of honey in the comb, mostly in one-pound sections, but some in 1½-pound sections. I took 100 pounds from one colony that did not swarm. I could have got 15 cents per pound for the honey, but I kept the most of it for my own use. I shall put some sections back on the light colonies, to help them out. Taking all things into consideration, it was a poor season for me. In the spring the late frost killed the spring blossoms, and it put the bees back in swarming. The most of the honey was gathered from wolf-brush (we call them verbenas), Alsike clover, some from buckwheat, mustard, dogwood, grasses, and other blossoms along the creeks; also some from golden-rod. They worked very strong on it for awhile, after almost everything else failed. The first honey was very light in color, and was the nicest of the season. The bees gathered pollen very late in the season. Our bee-men here are mostly men that seem to think they know enough about bees, and do not need to take a bee-paper; but I like the Bee Journal very much, and think that all bee-men should read it. Alsike is my choice as a honey-plant. I would like to see more raised in our country. Golden-rod was good for late work here, and I would vote for it as the national flower.

Ira N. Lyman.

St. Peter, Nebr.

Good Yield Per Colony.

My report for 1889 is as follows: My 27 colonies of bees, that I had last spring, averaged about 150 pounds of honey per colony, besides increasing to 54 colonies. The honey is both comb and extracted.

Empire Prairie, Mo. John Haskins.

Cloth-Base Foundation.

On page 779, I find an article by John Craycraft, on "cloth-made foundation," of which he claims to be the inventor. In confirmation of the foot-note of the editor, please let me say that in making foundation last spring, I immersed cheese-cloth in melted beeswax, and stamped it with the Vandervort foundation-mill, and put from one to three frames of the cloth foundation —named "New Departure"—in three hives. In another hive I put a frame of beeswax foundation, half the length, and the cloth foundation the other part. The bees drew out the *wax* foundation, and stored their honey, but *rejected* the cloth foundation. They did not accept the cloth foundation in any of the hives, but were disgusted, and worked to remove it by tearing it to pieces; and I found my "New Departure" in strings, and my anticipations of a patent vanished.

W. Johnson Baker.

South Montrose, Pa.

Results of the Past Season.

I started in with 27 colonies in the spring of 1889, and increased them to 41 colonies, of which I sold 6, leaving 35 on hand now. I obtained a total surplus of 2,036 pounds of honey, of which 280 pounds are in one-pound sections, and the rest is extracted; the average per colony being 75¼ pounds, spring count. By the middle of October, my bees were arranged inside the hive for wintering. On Nov. 1 we had the first snow-storm, and have had since then two cold spells, so that the thermometer registered 2 degrees below zero. On Dec. 17 and 18, my bees had good flights, and seemed to be all right. On an average, my bees have about 30 pounds of winter stores per colony. I winter them this year without outside winter packing, except those in the new Heddon hives, for which I have prepared a vault. All my other hives are double-walled, heavily lined with building-paper in between.

Wm. Stolley.

Grand Island, Nebr., Dec. 19, 1889.

Bees were Crazy for Swarming.

Most of my bees are blacks, except a few that are hybrids. I wintered 30 colonies in the cellar last winter, and carried out, in the spring, 20 good colonies and 10 poor ones. I increased them to 52 colonies, and took 4,000 pounds of comb honey in one and two pound sections, over half being from white clover. I sold most of it for 10 and 12½ cents a pound. I have never seen the bees so crazy for swarming as they were the past summer; they would swarm if they had stayed in the hive just four days. I do not know what caused it, but I think they carried in too much honey, so that they could not build comb fast enough to store it away. JOHN E. THORSTAD.

Blair, Wis., Dec. 27, 1889.

The Past Season's Results.

At the commencement of the honey season of 1889, I had just 100 colonies, nearly all in pretty fair condition; and when the white clover came into bloom, they built up rapidly, and increased to 144 colonies; but I was working only 135 colonies for honey, the others being small colonies in which I reared queens. I obtained 10,884 pounds of honey—5,730 pounds in one and two pound sections, and 5,154 pounds of extracted honey. I am getting from 9 to 12½ cents per pound for the honey. I have sold about half my crop. I put the bees into the cellar about Nov. 19, and they are pretty quiet, but the cellar is rather warm, the mercury being at 50 degrees in it.

A. PINKERTON.

Marshalltown, Iowa, Dec. 22, 1889.

Experience in Bee-Keeping.

Seven years ago I first commenced in the bee-business. I bought a colony of black bees for $13.00. I was given the AMERICAN BEE JOURNAL to read, and in it I saw an advertisement of Italians for $10.00 per colony; I purchased one colony, commenced the same spring with the two, and I now have 5 colonies from the blacks, and 54 colonies from the Italians, and they are crossed with the Italians. If I had not obtained the Italian colony, I would have been out of the bee-business the second year. Bees did not do well in this vicinity the past year. I got only about 450 pounds of comb honey, but they went into winter quarters with plenty of stores; but December has been so warm that I am afraid they will get short of stores before winter is over. I do not think that there have been more than two days this month but what bees have had flights. R. A. ROSSER.

Nelsonville, O., Dec. 20, 1889.

Management of Swarms.

By reading Mr. Doolittle's article on page 775 of the AMERICAN BEE JOURNAL for 1889, it seems that he condemns the putting of a frame of brood in the hive of a new swarm. Still, judging from the way his article reads, he never tried it but once. I have tried it a thousand times, and never lost but one swarm. From the colony that casts a swarm I always take from one to three frames of brood, put them into a new hive, place the new hive where I wish it to stand, and put back into the old hive the empty frames. I put the new swarm in, and all goes well. I never had a wing of a queen-bee clipped, except one that I received from Mr. Doolittle. The reasons for placing unsealed brood in the hive first, is that it will keep the bees from leaving the hive; and if the queen is hurt or lost, the bees have something to rear another from. It also saves prepared combs, and straight combs can be secured both in the new and the old colonies. The new colony will store more honey, for if we manage the bees as we should, we will have a very large colony, and by helping them with from one to three frames of brood, it will not be three days until they are at work in the sections, and will store honey as fast as if they had not swarmed. The old colony will go to work, fill up the empty frames, and be ready for the fall flow of honey.

Casey, Ills. D. R. ROSEBROUGH.

Good Crop—Warm Weather.

The honey crop was good from white clover, but little from fall flowers. I obtained over a ton of comb honey in one-pound sections, and between 400 and 500 pounds of extracted. I am fearful that the warm weather will be injurious to the bees, as the young bees are out taking their first flight from nearly all the hives, which means rearing much brood. I have 113 colonies packed, 110 are in winter quarters out-doors. I had 65 colonies last spring.

D. C. McLEOD.

Pana, Ills., Dec. 25, 1889.

A Bee-Man—Golden-Rod Honey.

I can fairly call myself a "bee-man," now that I have 52 colonies in the cellar, all strong and healthy, which I hope to take out in the spring in fine condition. The past has not been a very good season for honey in this vicinity, as May and June were so cold and wet that bees could not fly much; and the latter part of the summer and early fall were too dry; yet I have no reason to complain, as my bees paid their way, and gave me over 1,200 pounds of surplus honey in one-pound sections. That procured from the golden-rod was of good body, and of a fine amber color, and sold for as much as the nicest white clover honey. The golden-rod receives my vote, every time. S. M. KELLEY.

Kirby, Wis., Dec. 20, 1889.

Tight or Loose Bottom-Boards.

For the last three years that I have been in the bee-business, I have failed to see any practical use for loose bottoms for hives, especially when we want to move them, or carry the hives into the cellar. I have only 10 out of 100, and that is 10 more than I hope to have next year. When I want to move a hive, I like to step up to it, and pick it up in my hands, instead of taking it up like you would a sick baby. It is claimed for them that they are better for wintering. After testing them in several ways, I find that they are no better than the tight-bottom-board hives. Last winter I made the test of ventilation in several ways, and found that the hives with tight bottoms, the covers on, and glued down as the bees had left them, wintered as well as any. The hives were placed with the front, or entrance, the lowest. This year I have them tiered up 5 high, with the front of the hive from 3 to 6 inches the lowest. The object of this is, to give the bees a better chance to expel the dead bees, and also to carry off any moisture that might condense, in case the cellar got too cold. I have the ⅜-inch entrances open the full width of the hives. A. C. WALDRON.

Buffalo, Minn.

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ We have some full sets of the BEE JOURNAL for 1889, and *new* subscribers can have the full sets for 1889 and 1890 for $1.80 until all are gone.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 20.—Comb honey is dull and lower, now quoted at 12@14c. Extracted, 7@8c., with few sales. Beeswax is now in good demand, at 24@25c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Dec. 26.—Sales are slow. Fancy white clover 1-lbs., 16@17c.; fair to good, 15@16c.; 2-lbs., 15@16c. Beeswax, 24c.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, Dec. 27.—White clover 1-lbs., 12@13½c.; basswood, 11@11½c.; buckwheat, 8@10c. Extracted, 6½@7½c. Beeswax, dark, 23@24c.; bright, 25@26c.
S. T. FISH & CO., 189 S. Water St.

CHICAGO, Dec. 27.—Sales are light, at 12@12c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.
R. A. BURNETT, 161 S. Water St.

DENVER, Dec. 28.—Comb, 1-lb. sections, 1st grade, 13@15c.; 2nd, 12@14c. Extracted, 6@7c. Beeswax, 20@25c.
J. M. CLARK COMMISSION CO.,
1421 Fifteenth St.

KANSAS CITY, Dec. 24.—Demand is light and prices lower, owing to bee-keepers offering honey at 11@12½c,, delivered throughout the West. Very fancy 1-lbs., 12 in a crate, 13 cts.: good, 12½c.; dark, 10c. Two-lbs., white, 12c.; dark, 10c. Extracted, white, 7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CINCINNATI, Dec. 24.—Demand for honey has been slow for a month or more, with a full supply of all kinds on the market. Extracted brings 5@8c.; while comb is sold at 14@16c.—Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

MILWAUKEE, Dec. 27.—Market dull; only best grades demanded. White 1-lbs., 13@14c.; 2-lbs., 11@12c.; dark 1-lbs., 12@13c.; 2-lbs, 10@12c. Extracted, white, in barrels, 7@7½c.: in ½-barrels and kegs or tin, 7½@8c.; dark, in barrels, 6@6½c.; in kegs, 6½@7c. Beeswax, 22@25c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Dec. 30.—Demand for comb honey has almost ceased, and choice lots can be picked up at almost any price. Extracted is doing fairly well. Basswood and California, 7½c.; orange-bloom, 8@8½c.; buckwheat, 6c.; Southern. 70@75c. per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

KANSAS CITY, Dec. 27.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

◆

New Catalogues and Price Lists for 1890 are received from—

F. A. Salisbury, Syracuse, N. Y.—4 pages—Apiarian Supplies.

J. M. Jenkins, Wetumpka, Ala.—60 pages—Supplies for the Apiary.

J. Stauffer & Sons, Nappanee, Ind.—16 pages—Bee-Hives, Sections and Supplies.

◆

☞ Some have requested us to print a card on a less number than 100 Honey Almanacs, and we have concluded to accommodate them. We will furnish 25 copies with card printed on the first page, **postpaid**, for $1.10; 50 copies for $1.70; 75 copies for $2.30. See prices for more on the page 20.

◆

☞ Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

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CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 **edition**)	2 25	2 00
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

SIMPLE AND CHEAP.

The most important invention since the introduction of the movable-comb frame. Bees made to hive themselves. Easily and quickly applied to all style of hives. For full particulars, address.

AMERICAN APICULTURIST,
2Etf WENHAM, MASS.

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TAKE NOTICE!

WE will allow a **heavy discount** on the Orders received this **Fall** and **Winter.** Estimates furnished, and correspondence solicited. New **Price-List** ready Dec. 1st,

A. F. STAUFFER & CO.,
40Etf STERLING, Whiteside Co., ILL.

Clover Seeds!

We can promptly furnish any quantity of White, Alsike, or Sweet Clover Seed at the following prices, which include sacks and cartage:

WHITE CLOVER.

Per bushel (60 lbs.)	$10 00
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Per peck (15 lbs.)	2 25
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Per bushel (60 lbs.)	$6 00
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WE make the **best** Bee-Hives, Shipping-Crates, Sections, &c., in the world, and sell them the cheapest. We are offering our choicest white 1-piece 4¼x4¼ Sections, in lots of 500, at $3.50 per 1,000. ☞ Parties wanting more, should write for special prices. No. 2 Sections at $2.00 per M. Catalogues free, but sent only when ordered. Address,

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CARNIOLANS

Bees and Queens bred from Pure Imported Stock with great care. Send for circular giving full descriptions. queens in June, $1. Address, **E. L. PRATT,**
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Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Jan. 18, 1890. No. 3.

"La Grippe" has taken full possession of the BEE JOURNAL office. Several of the corps are at this writing (Friday, Jan. 10) down with it. The following, from an exchange, gives a pretty correct diagnosis of the disease:

If you have "bigness" of the head,
 Catarrh and "ringing" ears,
A hot and feverish cuticle,
 And eyes suffused with tears,
An "all gone" feeling round your waist,
 And aching legs and hip,
Though "far from strong" you're hardly sick,
 You have not lost your "grip."

If you have running at the nose
 And constant fits of sneezing,
A chilly feeling down your back,
 As though your spine was freezing,
If in a "rocky," nervous state,
 Like one in drunken frenzy;
My friend, you've got the French "la grippe,"
 Or English influenza.

For several hours to-day the BEE JOURNAL office was entirely deserted, and the door locked—one after another left their post of duty, being unable to longer keep a perpendicular attitude—but we are hopeful that the worst is now passed, and that all will be at their post of duty again soon.

Later.—Monday, Jan. 13—the editor is still confined to his bed, but is convalescing slowly, and hopes to be in the office again in a short time. In consequence of this scourge, many of the items, and much matter, promised to appear in this issue, must now be indefinitely postponed—or until such time as the editor will be able to attend to them. All correspondents, whose various matters require his personal attention, will please accept this explanation, and have a little patience. G. W. YORK.

The Wisconsin State Bee-Keepers' Association will hold its sixth annual meeting in the Capitol, at Madison, Wis., on Thursday, Feb. 5, 1890. A complete programme of the convention will be duly mailed to the prominent bee-keepers of the State.

Honey for "La Grippe."—As this disease is rapidly spreading throughout the country, and various remedies for its cure are recommended by physicians, we will state what occurred near the editor's home a few days ago. A neighbor's wife was very low with the disease, and a consultation by three doctors was held, the result of which was to advise, as a last resort, the use of honey—saying, that if honey would not save her life, nothing with which they were acquainted could be relied upon to meet the case. The neighbor called at the editor's residence for some honey, and was fully supplied. It is prepared and used thus:

In one-half tea-cupful of *hot* honey, put the juice of one lemon, and take, as a dose, two tea-spoonfuls occasionally, or as often as seems necessary, and as hot as can be endured comfortably. In case the stomach is too weak to retain the honey, two or three tea-spoonfuls of milk will remove such difficulty. The editor of the BEE JOURNAL is following this prescription, and finds great relief from its use.

As now seems to be indicated, if honey proves to be the effective remedy for this general affliction, bee-keepers should be well prepared to treat it in their own families, and find a ready demand for at least some of their honey crop in every affected home in the land. Let apiarists spread the news—that "honey" takes all the "grip" part out of "la grippe."

Dandelions in Mid-Winter.—The unusually mild winter seems to be quite general all over the United States, and even where one would expect to find snow-drifts, and snow-bound people, dandelions and other flowers are nodding their pretty heads in the spring-like breezes. It has been so here in the region of Chicago until to-day (Jan. 13), but it is now growing colder, and may conclude to give us some winter weather yet. The following item was written for the New York *Sun*, by a correspondent from Reading, Pa., on Jan. 6—showing that even the bees are improving the winter hours:

> Farmers are plowing as though it were spring, and sheep and cattle are running loose in the pasture. The buds are bursting on the trees, and early wild-flowers and cultivated plants are beginning to bloom. In many places the meadows are fairly yellow with dandelions.
>
> The phenomenally mild weather has also had its effect on animated nature, and insects and reptiles are showing their susceptibility to the unusual mildness of the air. The warmth has brought out swarms of bees from the hives of James H. Pennybacker, of Cumru, of E. H. Moyer, at Berlin, and of other farmers in the neighborhood. The busy bees were out working on Christmas and New Year's day, the same as in July—a thing that has not happened here before, within the memory of man.

☞ J. C. Stewart, of Hopkins, Mo., is going to Colorado, and presents an opportunity for some one to buy his residence, bees, etc. See advertisement on page 46.

Essays on Extracted Honey.

In accordance with the plan outlined on page 19, the Committee selected to award the prizes on the "Extracted Honey" essays, have faithfully done their imposed duty in the matter, and, as the result of their deliberations, they have awarded the three cash prizes to the following competitors, as the ones entitled to receive the amounts offered for the three best essays:

First prize ($5.00), to Mr. W. T. F. Petty, of Pittsfield, Ills.

Second prize ($3.00), to Dr. G. P. Hachenberg, of Austin, Texas.

Third prize ($2.00), to Mr. W. L. Porter, of Greeley, Colo.

The "First prize" essay will be found on page 37, of this issue, and no doubt will be read with much interest, as will also the others which are to follow. The "Second prize" essay will be published next week, and the "Third prize" essay the week following. The other essays competing for the prizes, will appear in the BEE JOURNAL as we may be able to find room for them, from week to week, in good time so that the valuable experiences and suggestions which they contain may be profitably used the coming season.

Honey as Food.—Mrs. L. Harrison, of Peoria, Ills., for a recent number of the *Prairie Farmer*, wrote these words about the use of honey as "a staple article of food:

> The time has been when honey was looked upon as an article of luxury, or as a sort of drug-store commodity; but it is now advancing with sure and steady step towards becoming a staple article of food, and with an increasing demand.

To emphasize these true words of our good friend, it may be said that honey will become a "a staple article" of ordinary food just as rapidly as those who produce it will make it a part of their business to see that all their neighbors and their friends everywhere have an opportunity to help to dispose of the crop of honey. Judging from the testimony of those who have only partially tried them, the Honey Almanacs will prove a great aid everywhere in getting the public to use honey as an every-day food, and not treat it as something that can be afforded only on Sundays, or "when company comes." Try a hundred Almanacs, and see if they do not do the work. For prices, see page 46.

The Report of the proceedings of the 20th annual session of the International American Bee-Association is published, and will be sent to all members. Others can have a copy for 25 cents, postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

GLEAMS OF NEWS.

Clover as the National Flower.—Mr. R. E. Carter, of Mosherville, Mich., votes for clover as the National Flower, and sends us the following on the subject from the Iowa State *Register*, which commends clover for the National Flower by reason of its utility, as well as beauty. It says:

> Probably a greater number of the city papers favor the golden-rod. To the denizens of the city, in the fall of the year, when enraptured over everything they see in the rural districts, the golden-rod may be a beauty. But to the practical farmer it is simply a useless, nasty weed of no benefit as food for stock, no valuable medicinal properties; has no sweet scent, and only of moderate beauty just before frost. But the red clover is always sweet, beautiful, and in bloom nearly all summer. There is no flower more valuable to man. It produces the richest pasture, the most nutritious hay, and its blossoms produce the choicest honey, and it is claimed they have superior medicinal qualities. Its blossoms contain two of our National colors, while the golden-rod has neither. Clover is never a weed, or a nuisance in any place, or under any circumstances. It has only virtues, and no drawbacks. It is of utility wherever found, and in the world's material wealth it has no superior. Let us have something sensible when adopting a National Flower.

Col. Ingersoll extols its excellences and beauties in this grand rhapsody:

> A wonderful thing is clover. It means honey and cream; that is to say, industry and contentment; that is to say, the happy bees in perfumed fields, and at the cottage gate old boss, the beautiful, chewing satisfaction's cud, in that blessed twilight pause that like a benediction falls between all toil and sleep. This clover makes me dream of happy hours, of childhood's rosy cheeks, of dimpled babes, of wholesome, loving wives, of honest men, of springs and brooks and violets, and all there is of painless joy and peaceful human life. A wonderful word is clover. Drop the "c" and you have the happiest of mankind. Take away the "c" and "r" and you have the only thing that makes a heaven of this dull and barren earth. Cut off the "r" alone and there remains a warm, deceitful bud that sweetens breath, and keeps the peace in countless homes whose masters frequent clubs. After all, Bottom was right; "Good hay, sweet hay, hath no fellow."

Cannot Cool the Bee-Cellar.

Our bees were put into the cellar in November, the bottom-boards to the hives being left off, and the temperature has been 50 degrees and above, except once, by leaving the window open, it went down to 48 degrees, and the bees have been very quiet; but this morning the temperature is 58 degrees, and there is a little disposition to be uneasy shown by some of the bees, and it is so warm out-doors that I cannot cool the cellar. It has rained steadily for the last 24 hours, and the prospects now are fair for several days of such weather. I wish it would catch the "Grippe."

A. B. MASON.

Auburndale, O., Jan. 2, 1889.

Better still, we wish it would lose its grip.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

Adulterated Extracted Honey.

Messrs. Clemons, Cloon & Co., honey dealers of Kansas City, Mo., write as follows:

> Almost every number of the AMERICAN BEE JOURNAL contains an article on adulterated comb honey. Every bee-keeper, as well as as every honey dealer, knows that there is no such thing as adulterated comb honey; on the other hand it is well known that there is such a thing as adultered extracted honey, also that it is being sold every day, "represented as pure honey." It is also known that it can be sold at a profit and a price much cheaper than pure honey can be profitably produced.
>
> If less time was spent in discussing an impossibility, and a little more attention paid to a subject that we know is a reality, it might result in a great benefit to those interested in honey. If there is no law to stop the adulteration of honey, it is high time some steps were taken in that direction by the bee-keepers.
>
> The Bee-Keepers' Convention that lately met at Higginsville, Mo., started the ball to rolling, by appointing a committee to investigate the matter. If all bee-keepers' conventions would follow their example, it would not be long before all adulterated honey if made or sold at all, would have to be stamped or labeled as "adulterated," and sold as such; but as it is, there is not much encouragement for producing extracted honey, when it has to go to the market and compete in price with glucose honey; but if these glucose men are compelled to label or stamp their mixture, just what it is, they will soon find very little encouragement for their business.

We do not believe that much adulterated honey can be found on the markets. The price of the pure article is so *low* that it kills the business of adulteration. When it will not pay men to sophisticate, they will not do it. We seriously object to a law being enacted like the oleomargarine law. It simply legalizes an evil upon the payment of a tax. The whole system is unreasonable, unjust and pernicious from beginning to end. Instead of crushing the Monster, it feeds and pets him, so that it may do the more damage.

Silo and Silage, by Prof. A. J. Cook, of Agricultural College, Mich., is the title of a pamphlet of 44 pages, just issued. It contains a plain statement of the method adopted and in successful operation at the College. The Professfor says: "My silo has been a surprising success, and in this little *brochure* I shall tell in a plain, simple way, how I grow the corn, build my silo, fill and cover it, and feed the silage." Every farmer should read it.

☞ To open the BEE JOURNAL and have it lie flat, carefully fold over each crease the opposite way to what it was when in the mails. Then lay it out on a table or desk, under a large book, and the leaves will soon become straight.

The Apiculturist for January comes to hand with a new cover and an "improved make-up." It is printed in good style, and is full of practical ideas and suggestions. We wish it abundant success.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as any story. Price, $1.00.

An edition in strong paper covers is issued for premiums. It will be mailed as a present to any one who will send us *two* new subscribers to either of our JOURNALS.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, *Sec. and Treas.*, Bedford, O.

☞ The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890. GEO. SPITLER, *Sec.*

☞ The annual meeting of the Colorado State Bee-Keepers' Association, will be held in the Chamber of Commerce building, in Denver, Colo., on the third Monday in January, 1890, for the election of officers and other business. Everybody is invited to attend. E. MILLESON, *Pres.*

☞ The Eastern New York Bee-Keepers' Association, will meet in Convention, Jan. 20 and 21, 1890, in Agricultural Hall, Albany, N. Y., at 10 a.m. All interested in bee-keeping are cordially invited to attend. The Farmers' Institute is held at the same place on Jan. 22 and 23, 1890.
W. S. WARD, *Sec.*, Fuller's Station, N. Y.

☞ The 21st annual meeting of the New York State Bee-Keepers' Association will be held in the Court House at Rochester, N. Y., on Feb. 5, 6, and 7 1890. Reduced rates will be given at hotels and on all principal railroads. The programme and full particulars will appear in due time. Each county association is requested to send two or more delegates. G. H. KNICKERBOCKER, *Sec.*

☞ The twenty-third annual meeting of the Minnesota State Horticultural Society, in joint session with the Minnesota Bee-Keepers' Association, will be held in the Town Hall, at Excelsior, Minn., on Tuesday, Wednesday, Thursday and Friday, Jan. 21, 22, 23, 24, 1890. The Bee-Keepers' Association will occupy a portion of Friday morning for its second annual meeting, and will discuss questions pertaining to bee-culture, as related to horticulture. For further particulars, address Wm. Urie, Secretary of the Minnesota Bee-Keepers' Association, Minneapolis, Minn.

☞ The annual meeting of the Vermont State Bee-Keepers' Association, will be held at Burlington, Vt, on Jan. 21 and 22, 1890. Excellent hall accommodations have been secured at the VanNess house. The Central Vermont Railroad has granted round-trip tickets from the following places: Rutland, White River Junction, Cambridge Junction, Richford via St. Albans, Ticonderoga, and all intermediate points, to Burlington and return for fare one way. A good meeting is expected, and all are invited. For further information and programmes, apply to the Secretary,
J. H. LARRABEE, Larrabee's Point Vt.

QUERIES AND REPLIES.

Chaff Hives vs. the Single-Walled Hives to Secure Honey.

Written for the American Bee Journal

Query 680.—My bees are in chaff hives. They have stored very little surplus honey, though the brood-chambers are well filled. My neighbors claim that my shortage of surplus is chargeable to the chaff hive. They say that the hives keep the bees too cool, hence the bees will not start so early in the morning, etc. 1. Is this not all "chaff?" If not, I wish to change my hives. I cannot afford to keep bees for fun. I would like to hear from those who have had experience. I have persuaded one of my neighbors to try chaff hives, and made two for him. He says that the colonies in those hives gave no surplus, while he took an average of 100 pounds from each of the others in single-walled hives. 2. Will bees work better in single-walled hives? If so, why?—Michigan.

I have had no experience with chaff hives.—J. M. HAMBAUGH.

1. I think not. 2. No. My most productive colony is in a double-walled hive.—M. MAHIN.

1. Yes, it is "all chaff," as I know by experience. 2. No. I prefer chaff hives for surplus comb honey.—G. M. DOOLITTLE.

During the working season, keep the bees in single-walled hives; or give more sunshine, if kept in chaff hives.—J.P.H.BROWN.

1. I do not think that the lack of surplus is owing to the hive, but to the bees, pasturage, or management. 2. I think not, but I would not want to use any other.—R. L. TAYLOR.

1. I believe it is. The bees in a chaff hive are certainly warmer on a cool morning, or day, than those in a single-walled hive, and also cooler on a warm day. The chaff hive equalizes the temperature.—A. B. MASON.

I never owned a chaff hive, so I cannot speak from experience. If I lived in a warmer place, I think that I would try them. A trial of two, or three, does not prove much. If 25 or 50 of each kind are tried side by side, you can tell better.—C. C. MILLER.

I have used chaff hives with little success. I always obtained much more honey from single-walled hives, than from the chaff-packed ones, in the same yard; but locality has very much to do with it.—H. D. CUTTING.

1. I think that it is "all chaff." 2. I think that after the cold days of spring are past, there is little advantage of either hive over the other, as far as the honey-yield is concerned. We have had them side by side for years, and this is the verdict.—A. J. COOK.

There is something in what is said by your neighbors, though we do not believe that it would make a *very great* difference in the yield. At any rate, we are not in favor of chaff hives. We have tried 80 of them, have quite a number in use yet, and do not want any more.—DADANT & SON.

1. I do not think that the trouble is in "chaff hives." 2. I think that bees will work as well in one hive of the same size brood-chamber, as in another. The fault, if any, must be in the season, or general management. It is said that chaff hives winter bees better than others, but I have not found such to be the case.—J. E. POND.

We have never used chaff hives, though we have frequently left chaff cushions on many hives until late in the season; and we thought that it was beneficial. It is possible that in some seasons (cool ones), if your hives stand in the shade, chaff walls might be a detriment; but if your hives face the east, and stand where the morning sun will strike them, we should consider chaff walls an advantage. There are other reasons, probably, that are not mentioned, that cause the difference you speak of.—MRS. L. HARRISON.

I live in Michigan, and I do not believe that chaff hives are too cool in summer, but I do know that their bulk and weight will surely ruin such a system of bee-keeping as is now necessary to make the business pay, at the present price of honey.—JAMES HEDDON.

1. Yes, it is "all chaff." When the thermometer registers 80 to 90 degrees outside the hive, is it likely to be any cooler in so small a house? While I think that chaff hives are unnecessary, and an expensive luxury, I do not believe the charges of your neighbor are sustained by experience. 2. I do not believe that it makes any difference, except in early spring, when chaff may be of some advantage.—EUGENE SECOR.

1. I do not think that the difference can be charged to the chaff hive. I have used chaff hives extensively, having had in use 250 at one time; they always gave me good results. Nothing is more important in bee-keeping, than a good bee-keeper. 2. Bees will not work better in single-walled hives than in double-walled hives.—J. M. SHUCK.

I once had a chaff hive nearly as "big as a barn," and the result was very much as you state your case. I had bees in that hive for several years, but got but little honey from the colony. I made it for the "Boss" out-door wintering hive, but the bees succumbed in the winter of 1880-81. A hive, to give the best results, should be small, and rather shallow, so that the bees cannot store the entire honey crop in the body of the hive.—C. H. DIBBERN.

In the comparatively moderate climate of Kentucky, taking everything into consideration, bees succeed best in single-walled hives. In this limited department, I cannot enter into the particulars accounting for this fact. In my apiary of from 50 to 120 colonies, I experimented with 14 chaff hives, and about 10 double-walled, "dead-air-space" hives, for five or six years; the rest of my bees being in single-walled hives. The latter have given much better results than the chaff, etc., hives. But I attribute the superiority of the single-walled hives, to their better adaptability to skillful management in "tiering up," without which the best results are unattainable.—G. W. DEMAREE.

This query opens up a large subject that can only lightly be touched upon here. It involves the whole question of the out-door care and protection of bees in winter and spring. A chaff hive with damp walls, packing and combs, will not winter and spring bees as well as a single-walled hive. To succeed with chaff hives, the packing must be kept dry throughout the winter and spring, and that is difficult to do with *chaff* as packing, for it is apt to become damp, and then the effect is to keep the bees "too cool," as alleged. Still, with proper management, we can succeed better with the chaff hive than any single-walled hive in existence, and not only for wintering, but for obtaining large crops of honey.—G. L. TINKER.

The pasturage, climate and surroundings control the honey crop—the hive has but very little to do with it. Your neighbor was "chaffing" you at a good rate. Much observation has determined that there is but little difference from the use of double or single walled hives.—THE EDITOR.

CORRESPONDENCE.

FIRST PRIZE.

Extracted Honey—Production, Care, and General Use.

Written for the American Bee Journal

BY W. T. F. PETTY.

Extracted honey is the only pure natural sweet. It is honey in its purest condition, exactly as gathered and ripened by the bees, without the admixture of any foreign matter whatever.

In this latter particular it differs from the "strained" honey of a few years ago, which was obtained by crushing combs—some, possibly, containing dead larvæ, pollen, mashed bees, etc., forming a conglomerate gummy mess—into a vessel, slightly heated, and then squeezed out by the hands, or by less effective means. The product was a honey rank in flavor, and disgusting to the sight, as particles of pollen, bees' wings and legs, and comb were visible; and these associations made it anything but toothsome to the consumer.

But thanks to the inventive genius of progressive apiarists, for the movable-comb hive and the extractor. By means of these inventions, bee-keeping has been revolutionized; in place of the "strained" honey of our fathers, we behold a product that stands without a rival as a sweet; a product that is no longer a luxury—to be had only by the rich—but it is within the reach of all, and to-day, the yet infant industry of honey-production bids fair to unfetter the masses—when they learn the merits of extracted honey—from one villainous monopoly—the sugar trust, that now has its iron heel of tyranny upon our throats.

The application of these inventions to the production of extracted honey, though differing in some of the minor details with different apiarists, is about as follows:

The bees are obliged to build their combs in movable frames, which may be removed from the hive without injury to combs or bees. These combs, when filled with honey, and sealed over by the bees, are taken from the hive, the adhering bees brushed off, and the combs taken to the extracting-room. For this room, the necessary appliances are, an extractor, an uncapping-knife, uncapping-table, can for pouring the newly extracted honey into, and, lastly, the receptacles in which it is to be placed upon the market.

OBTAINING PURE EXTRACTED HONEY.

Now we are ready for the *modus operandi* for obtaining the pure liquid honey from the combs :

The frame of comb containing the honey to be extracted is taken by the operator, the upper end being held by his left hand, while the lower end rests on the uncapping table ; with the uncapping-knife in his right hand, he now commences at the lower end of the comb, and cuts off the cappings of the sealed cells, leaving the honey exposed as it was before being sealed by the bees. The cappings thus cut off, drop into a sieve, which is beneath the center of the uncapping-table. The top of this table should be covered with tin, and made to drain into the sieve under which is a vessel for catching the drippings.

The comb now being uncapped on both sides, is placed into the extractor, which is a machine for separating the honey from the comb, by means of centrifugal force. This force and its mode of action are best illustrated by taking the familiar case of the grindstone. All have, no doubt, during that period of life when a fondness for revolving wheels was at its highest point, turned father's or grandfather's grindstone, and watched with childish delight the sparkling drops of water fly off tangentially from the perimeter of the stone.

The honey-extractor is so constructed that this force, which causes the drops of water to fly from the stone—in the case of the grindstone—causes the liquid honey, in the case of the extractor, to be thrown from the cells of the combs.

THE EXTRACTOR AND ITS USE.

As commonly made, the extractor is a large can in which is a revolving basket, or frame, made of coarse wire-cloth, the axis of revolution being vertical. This axis is so geared with cog-wheels that for each revolution of a crank, turned by the hand, the basket will make about five revolutions.

The uncapped combs are now placed in this frame, which usually holds two frames of combs—though extractors holding ten frames have been made—the uncapped cells resting against the coarse wire-cloth. The operator now gives the crank of the extractor a few turns, reverses the combs, and turns again, and the honey contained in the combs is "slung" out, as it were, against the side of the can, down which it runs, and is drawn off though a gate at the bottom.

This honey is now strained through a cheese-cloth into a large can, that will hold 300 pounds or more, and allowed to clear up before drawing off into receptacles in which it is to be placed upon the market. These latter should be small tin or glass vessels, for a retail trade, or 50-gallon oak-barrels, waxed, for wholesale trade.

QUALITY OF EXTRACTED HONEY.

This depends much upon the care and knowledge exercised by the apiarist in its production. Honey extracted from combs partly filled with pollen, larvæ, and young bees, almost ready to be sealed over, is little better than the olden time "strained honey." Extracted honey, to be a first-class grade, must be produced in fresh, clean combs which contain no pollen, larvæ or young bees ; it should also be sealed before being extracted, and each variety of honey kept separate from all others. The reasons why such precautions are to be observed is evident, viz :

Fresh, clean combs should be used, for the reason that if foul and musty combs be given to a strong colony of bees in the height of a honey-flow, they will store the honey in these combs before they have been thoroughly renovated. The result is, that the honey stored in such combs is of an inferior quality.

Combs partly filled with pollen should not be extracted from, when a strictly first-class article of honey is desired, because some of the cells of pollen will become disseminated through the honey while extracting. The presence of pollen in extracted honey produces a very undesirable effect, spoiling the flavor and delicate aroma of the honey, no matter how pure it may be otherwise.

Combs containing larvæ and young bees should not be extracted from, for no matter how experienced the operator may be, sealed honey—such as is fit to be extracted to produce a first-class article of diet—cannot be thrown from the cells with a force less then that with which the larvæ and young bees are thrown. Such a practice of extracting from combs containing larvæ and young bees, is to be condemned under any circumstances.

WHEN TO EXTRACT HONEY.

That it should be sealed over before being extracted is now, I believe, admitted by nearly all apiarists.

It has been claimed by some, that more honey, and honey which is of just as good quality, can be produced by extracting just before the bees seal it over, or just after they have sealed over the first few rows of cells at the tops of the frames. This method, of course, saves the bees the work of sealing, and the operator the work of uncapping, but necessitates curing the honey by artificial means, which is done by allowing the extracted honey to stand in an open vessel, exposed to a warm, dry atmosphere.

VARIETIES OF EXTRACTED HONEY.

That each variety should be kept as distinct as is possible, is readily seen by all, when it is known that there are as many different flavored honeys as there are different kinds of bloom from which the bees gather honey. This is accomplished by having a knowledge, and keeping a watch, of the surrounding flora which produces the honey ; thus knowing just when one plant ceases to yield nectar, the surplus of which must be removed before another begins to yield. Of course, in all cases each variety cannot be kept entirely distinct, as there may be two or more honey-producing plants yielding nectar at the same time ; in this case, the honey should be classed and put upon the market as "all sorts."

CARE OF EXTRACTED HONEY.

This, as a rule, is not understood by many, though the physical laws underlying its preservation are simple, viz :

Honey, being a dense liquid, is slower to change in temperature than the surrounding atmosphere, therefore, when the temperature of the honey is lower than that of the surrounding atmosphere, any aqueous vapor in the air which comes in contact with the honey, is condensed by the cooler honey. Thus it is that by continual changes of temperature, honey which is exposed to moist air becomes watery, and finally the process of fermentation sets in. This abnormal condition of honey obtains, slowly, or with rapidity, in proportion to the changes of the temperature, and moisture in the atmosphere to which it is exposed. These facts lead us directly to the only means by which extracted honey may be safely kept, viz : 1. Hermetically sealed. 2. Kept in a warm, dry place, where the temperature is reasonably even.

As a rule, extracted honey will candy in from three to four weeks after being extracted, though I have known white clover honey not to candy until the third year after extracting. This candying process is a good proof of the undulterated product.

VARIOUS USES OF EXTRACTED HONEY.

The avenues for the consumption of extracted honey are many, and are daily increasing. Among those most common may be cited the following, viz : Table use, confectionery, pastry and cakes, jellies and jams ; canning and preserving fruit, both cooked and in its natural state ; curing hams and meats of various kinds, in making mead, metheglin, honey-wines harvest drinks, and liquors ; honey-vinegar, honey egg-foam, medicinal preparations, syrups, ointments and salves. It forms the principal ingredient in the formation of printer's rollers, and is used in the manufacture of beer, ale and tobacco.

The excellence and beauty of a first-class article of comb honey is appreciated by many; but a first-class article of extracted honey is something with which few people are familiar. But this is a progressive age, and as ignorance is rapidly yielding to enlightenment, so is extracted honey rapidly taking its proper place at the head of all sweets.

Pittsfield, Ills.

RACES OF BEES.

Descriptions of Various Races of the Honey-Bee.

Read at the Michigan Convention

BY PROF. A. J. COOK.

By special request of our wide-awake Secretary, I was led to prepare this essay. Our Secretary is not only full of enterprise, but also of practicality. His enterprise almost always looks towards utility. He loves all truth; but that truth which carries blessing with it, is doubly dear to him.

Secretary Cutting also believes in fairs. Perhaps I ought to except Dr. A. B. Mason, when I state that no man in the United States has had so extended and so useful and valuable an experience with honey-exhibits, as our Secretary. Thus I have concluded, or inferred at least, that he has felt the need of more accurate descriptions of races, as they were exhibited at our various expositions. This conclusion leads me to make this essay practical.

My object, then, will excuse lack of fulness in minute details, which otherwise should gain admittance in such descriptions. I shall, for like reasons, consider, at this time, only those races that are actually among us, and shall speak only of characteristics that are valuable, either from the stand-point of profit, or identification.

In the study of races, which have been developed by Nature, and not man, we should always remember the environment. Where circumstances press hard, the law of natural selection, of necessity, produces greater excellence. We should expect, then, that the Carniolan bees, the Italians, the Cyprians, and the Syrians, would each possess very valuable characteristics. The crowded colonies, the restricted areas, and, especially in Syria, the frequent and excessive drouths, all combine to weed out the less prolific, and the less industrious colonies. We might reasonably expect, then, to find in these races, longer tongues, larger honey-stomachs, increased industry, greater endurance and prolificness, than in races of a less trying environment. I fully believe that a close study of the surrounding conditions of each race, would quickly explain peculiarities of structure and habit. Thus I believe we may easily account for the irritability of the Cyprian and Syrian races, by simply studying their history; and, likewise, the amiability of the Italian race, and the Carniolans.

I think, too, that this explanation would explain the speedy change of disposition of the Syrian and Cyprian bees, as they are handled, and their temperaments studied and humored. The Syrians are remarkably quiet and inoffensive unless disturbed, and I found that very soon upon domestication, the angry mood ceased to come, with handling. In our study of races, this law of change through environment should always be kept in view.

In describing or studying races, there are some parts that are specially important. The color and hair-covering of the thorax are to be noted. The rings of the abdomen are also important. As is known, there are six rings, or segments, to this third or posterior division of the bee's body. This is true of both the workers and the queens. The color of these several rings, and the color and amount of hair that they bear, are valuable aids in identifying the separate races. Usually, there are four rows of plumose hairs—a row to each of the rings, if we except the first,or the one next to the thorax, and the last, or the one at the tip of the body. Often the color of these rings of hair, as in the case of the Krainer or Carniolan bees, is the most ready means to identify individuals of the race.

The Black and the Yellow Bees.

Before I speak of the separate races, let me state that we may divide our common honey-bees into two types—the black and the yellow bees. To the black bees belong the common German bees, and varieties of this type, such as the Carniolan, heath bees, etc. These are the European bees, *par excellence*, and are peculiar in coloration and in *habitat*. It is very possible that some of the African races are derived from this race. Of these we are practically, at present, only interested in the German and Carniolan bees, and so I shall only speak of them in fuller detail.

The yellow races are very well fixed. Whether they should rank as varieties of one race, or as separate races, is a question. If their characteristics of color and habit are persistent, then each is a race. I am inclined to the opinion that this is the case. Such questions, however, are not very important, as our present philosophy simply makes species, races, and varieties a difference of quantity in variation, and fixity of characteristics. Time solidifies a variety—if we may so speak—into a race, and with longer time the race crystallizes into a species.

Of these yellow races—we will call them "races"—I shall only consider the three which are at present in our American apiaries, and are exhibited at our fairs, viz: the Italian, Syrian, and Cyprian.

The Black or German Bee.

This bee is so well known, that I should not pause to speak of it, were it not that it will form a good standard for comparison.

We may say that the German bee is large, gray-black—the queen is obscure-brown beneath—and irritable in disposition. The color, black, is due to the body, which is shining black, as may be seen in robber or diseased bees, where the hair is gone. The gray is due to the rows of hairs, which are light in color, and so with the black, dark ground, give the gray-black color familiar to us all in these German bees.

The tongue of the black bee is shorter than that of the yellow races. Their irritability makes them unsuited to the beginner, though with the bee-tent, and other improvements, the experienced apiarist would not mind their ill-temper.

It is often said that German bees are more prone to rob than others, and less energetic in defending their hives. The first may come from idleness, consequent upon their shorter tongues; the latter, from strength of colony, consequent upon their moderate prolificness. Their restless nature is well known, as their disagreeable habit of rushing about the comb, and falling from it, are too evident to escape attention.

It has been claimed that black bees are more hardy than are the yellow races. Quite likely the fact that black bees are more likely to be in box-hives, where the attachment of the combs direct to the walls of the hive give a certain protection in severe winters, gave rise to this opinion. Whether true or not, this is no very essential matter; for, granting superiority, it is not sufficiently pronounced to remove the necessity of protection, and with protection and proper care all are alike safe.

That German bees produce very white comb honey is, beyond question, true. A little thicker capping, or a little greater separation of the caps from the honey, though really a small matter, is in fact a matter of much importance. Indeed, it may be that which sells our product. In this case, a little added beauty may be the "taking thing."

Apiarists, long ago, noted that black bees are a little more ready to leave the brood-chamber, and store in the sections placed in a chamber above, than are the yellow races. With the neophyte, this quality would count; with the experienced bee-keeper, who has learned the best skill of the art, this counts for much less.

If we except the white cappings, and the readiness to store in the surplus chamber, we may say that in every peculiarity of structure, temperament and habit, the German race is inferior for the practical work of the apiary.

It is easy to see why the German bees are inferior—their home is the cold Northland, where winter's cold and merciless grasp, ever and anon, crushes out the bee-life, destroying all but the most vigorous. Thus the increase is limited, and natural selection does not act with the severity that it does in the more favored tropics. Thus we easily see why the black bee is less developed in the direction of rapid production, than are some of the other races.

It remains to be said that the German bee, crossed with any of the yellow races, produces a bee much superior to itself. Cattle and horses are bred for different purposes, and so crosses produce confusion, and cross-breeding has little to recommend it. With bees, it is not so. All races are for the same purpose; so there is no objection to crossing; indeed, it seems more than likely that the bee of the future will be a hybrid bee. If so, quite likely the German race, or some of its varieties, will enter into the combination.

The Carniolan Bees.

These bees are certainly a well-marked variety of the German race. Their characters are so well marked and so fixed, that it would be no great mistake to consider them a race. Indeed, some very good authorities regard them as a distinct race. If I mistake not, Mr. Frank Benton thus regards them, and surely few are better prepared to judge correctly than is he.

Whether we consider them a variety or a race, I think that there can be no doubt; but that they are an offshoot from the common black bees. More amiable than the Italian, and with "business habits"—if we may use the expression—equal to the best of the yellow races, no wonder this bee has so rapidly grown into favor in both Europe and America.

We may well quote Shakespeare's "Sweet are the uses of adversity," for here, again, hard circumstance has resulted in an improved variety. The winters of Austria are mild; the region of Krain is isolated by lofty mountains; thus with redundant bees and restricted forage, we have all the factors of rapid progression. In Austria, as in Italy, the bees have been manipulated, and thus the angry temperament has been subdued.

The Carniolan workers are not only very large, but the abdominal rings of hairs are very plainly marked. The hair is light gray, so that the bees seem distinctly banded. The color of the abdomen is grayish black, or dark drab, and so it is not so black as the typical German bee. The wings are large and strong. Thus the color of the Carniolan bees, and the light rings of hairs, are the distinguishing characteristics.

The drones are also gray, hairy "fellows," and very robust of body and wing.

The Carniolan queen is very large—larger, perhaps, than the queen of any other of our domesticated bees. As is well known, while the comman black queen is very black above, she is bronze-colored beneath. The typical Carniolan has this rich bronze color for the entire abdomen. The queens vary not a little—some are nearly as black as the German queens, and sometimes the bronze is almost as golden as the brightest Italians. Mr. Benton says that a faint yellow or rust-red band sometimes shows in both queens and workers. The thorax is thickly set with gray hairs.

The variation in queen and workers would argue for variety *versus* race; yet we must remember that the range in variation of Italians is nearly as great.

The qualities of the Carniolan bees are, great prolificness, exceeding amiability—they are the gentlest of bees; they equal or exceed the German bees as comb-builders, in the whiteness of their comb honey; are very large; and so, doubtless, have large honey-stomachs; are more quiet on the combs, and more beautiful than are the common black bees. It is also claimed that they defend their hives well, and resist severe cold better than most other bees.

It is further stated that Carniolans are more disturbed by loss of queen than most other bees; are prone to rob, when forced to idleness; and, perhaps, most objectionable of all, are great swarmers. If this last, however, simply follows from excessive prolificness, and can be easily controlled by an expert apiarist (as I am led to believe, or at least to hope), then the matter is not so objectionable.

If, as already stated, the German bees are promising, to cross with other races, to produce the coming bee, then surely the Carniolan is pre-eminently so; for these bees possess not only the virtues of the parent bees, but these virtues are exalted in the Carniolans; while they (the Carniolans) are strong in many points where the blacks are conspicuously deficient.

The Italian Bees.

These bees are so well known that I need not dwell long upon their characteristics. Yet, as before with the German race, it is well to point out their leading characteristics, as a sort of a yard-stick to be used in gauging the other yellow races.

The Italian worker is very slightly smaller than the German worker. The three anterior abdominal rings are golden yellow in front, and very dark behind, thus giving the three-banded appearance, so much admired in these bees.

The rings of hairs are gray, and the third and fourth are usually very distinct. These hairs are often very white, and hence arose the albino variety, which, by careful breeding, has become a good variety. (These bees are usually very gentle and very handsome. Further than this, I have failed to discover any superior excellence in the albino bees). The thorax is densely covered with gray, yellow, or brown hair; and beneath, the body is usually dark, quite or near to the tip. The tongue is longer than the same in the German bee.

The drone is irregularly marked with dark and yellow above, the amount of yellow varying much in different specimens. Sometimes the yellow appears in rings, and often the entire base, and sometimes the whole abdomen is yellow. The hair is dense, and light-yellow in color.

The queen also varies much in color. Here the yellow is not in rings, but marks the upper portion of the abdomen more or less from the base. Frequently the entire upper surface is yellow, though more often a greater or less distance from the tip is dark.

The yellow color of the queen and workers varies not a little. Often we find them very dark, or leather-colored, and, again, a beautiful bright yellow. I am inclined to the opinion that the dull, leather-colored ones are usually most profitable. It is possible that the brilliant yellow bees have been bred for color alone, and so they have lost, partially, the more desirable characteristics of activity and prolificness.

It is not necessary for me to praise the Italian bees—their works have praised them, as all experienced bee-keepers know. Their longer tongues enable them to gather where the blacks cannot; hence they are often busy while the blacks are idle; and so, for the nonce robbers, while the Italians are honestly storing. Though not so eager to rob, they are excellent to defend against robbers. Exceedingly active and prolific, very gentle, quiet on the combs, and the queen easily seen and found—no wonder they have gained a first place in the favor of the apiarian public.

The fact that Italians are not so ready to go into the supers, and do not produce as white honey as the blacks or Carniolans, argues conclusively that an improvement is possible, and so, desirable. It goes without saying, that the Italians would form a valuable pillar—though possibly not the best—in the foundation of the bee of the future.

The fact that our American Italians are often improved by the introduction of fresh importations, proves that Nature may breed better than man. Nature only consults utility—the best is always her cry. Man often reaches for beauty alone—beauty as beauty. Hence while the hard conditions of their restricted home in Switzerland continually improves the Italians, man's selection may not result so happily, unless very wisely made.

The Cyprian Race of Bees.

These bees are slightly slimmer, possibly a trifle smaller, than the Italians, with the abdomen more pointed than the same in the Italian bees. The two anterior of the three yellow bands are wider than in the Italians; while beneath the abdomen is yellow, nearly or quite to the tip. The scutellum—the little lunule at the posterior end of the thorax—is bright yellow. This, with the underside of the abdomen, forms the most ready means to identify the Cyprian worker. The hair rings are light yellow.

The drones are slim. The thorax and rings of the abdomen are orange yellow. Each ring on the side of the abdomen is said to always show a black dot.

The queens are small, and very slender. Their abdomens are long, and ringed, as are the workers, only there are four rings, all of which are dark orange-yellow. The yellow hair on the thorax, and the hair-rings on the abdomen of the same color, consist of dense, fine hair.

The Cyprian bees are said to vary less than any other race, and are exceedingly beautiful. From their Island home, we should expect this. Except a lack of amiability, these bees are much like the Italians in peculiarities of habits, as well as of structure.

They are very active, very prolific, not prone to rob, excellent to defend their hives against robbers, beautiful to look upon, and the queen is easy to find. That they should be excellent as producers, and cross and irritable, is easily explained. Cold does not thin them out; but enemies are numerous and active. No wonder, then, that natural selection works here with great energy and power.

There are no skilled bee-keepers in Cyprus, so these bees have not been handled much, and we should expect that they would be irritable, and impatient of manipulation. There is no doubt but that with more general adoption, the objection of temperament would soon disappear.

I can but think that it was a misfortune that these bees were so soon given up by American bee-keepers. If, even better than the Italians (as there is reason to suppose, except in point of amiability), then doubtless they would be even better than the Italian bees to cross with the Carniolan, in forming the "coming bee." I fully believe, that, with handling, the Cyprians would be so modified, even if kept entirely pure, that very soon this irritability would be no objection to the experienced apiarist.

The Syrian Race of Bees.

I have had not a little experience with the Syrian bees, and believe them to be the best of the yellow bees. Though irritable at first, they scarcely ever attack a person unless provoked, and, with manipulation, soon become very easy and pleasant to handle.

The workers, when they first come from the cells, are almost like the black bees. The rings are so approximated that the yellow bands are almost concealed. After they expand and commence work, they are much like the Italians, except that they are more yellow beneath. They are a little smaller, possibly, than the Italians, and are more uniform, and a little brighter.

The drones are black above, and yellowish brown beneath. The legs are black. Each segment of the abdomen is bordered posteriorily, above, with brownish yellow. The hairs above, on the thorax, are olive brown, while on the other parts they are lighter colored. Like all the bees of this race, the drones are wonderfully uniform.

The queens are black, with four leather-colored bands marking the segments from the second to the fifth inclusive. The legs and under side of the abdomen are yellow. Except that they are not quite as amiable—though with handling they soon become very pleasant to manipulate—I believe that the Syrian bees possess all the virtues of the Italians, and most of them in a more marked degree.

It is possible that the laying workers appear more quickly in queenless Syrian colonies than in the case of Italians; but this is scarcely a fault, for colonies should not be allowed to remain queenless; and if such a tendency make the bee-keeper more cautious and watchful, then we may well question whether it be a fault. I will say that we have not found this a matter of any moment.

Again, the Syrians do start many queen-cells. To the careful breeder, this is an advantage, and should be no injury to any bee-keeper. The matter of temper, as already suggested, need not count against the Syrians; with handling, it so soon disappears.

Like the other yellow races, these bees are not so ready to go into the surplus chamber, nor do they produce quite as white comb honey as do the German bees.

As the Syrian bees are very prolific, very active, excellent gatherers, breed when there is no storing—due doubtless to the fact that, as with no other race, the nurse-bees feed the queen nitrogenous food, even though the workers are forced to stop gathering; are slow to rob, and strong to defend their hives—in sooth, possess in a marked degree the merits of the yellow races, they are pre-eminently the bees to enter into the make-up of the "coming bee."

From the fact that the Syrian bees lack two important characteristics, which are emphatically marked in the Carniolan bees, it goes without saying, that the Carniolan race is the one most desirable to cross with the Syrian, to produce the bee of the future. I can but believe that a cross, or hybrid, will form the basis of the "coming bee." All science points that way: No objection—no valid objection—says nay. With our present light, these two races—the Syrian and the Carniolan—stand out prominently as the basic stock on which to build. I am strong in the belief that there is much to hope from experiments in this direction.

Mr. Frank Benton, whose ability aad experience combine to give his words greatest weight, places the Syrian bees as first of the yellow races, and the Carniolan bees as first—everything considered—of all bees. Granting, then, that the great improvement of the future is to be the carefully selected offspring of a cross, or hybrid (as any scientific breeder, I think, must grant), then we are surely warranted in recommending every breeder—who wishes to work for the best, and in the most promising lines—to unite these two races; and with a fixed ideal in his mind to work toward, carefully select, and reject, and I doubt not but that a rich success will in the end crown his efforts.

Agricultural College, Mich.

FOUNDATION.

Using Full Sheets of Foundation in Sections.

Written for the American Bee Journal

BY JAMES HEDDON.

This is the subject of Query 677, on page 6. The answers are quite comprehensive, and differ according to the various experiences of the different bee-keepers in widely-separated localities. There is one important point that has not been touched in all of the answers. Scientific bee-keeping discovered, and put it down as a fact, that the less drones the hives contain, the better. In a state of nature, bees need more drones to the colony, by twenty-fold, than they do in an apiary under the guiding hand of the bee-master. This is not all—we desire to fill the air with drones from certain colonies, while from others we prefer to have none at all, and my most successful honey-producing colonies are those that have no drones at all. This alone is enough to set up the theory that a successful and profitable colony needs no drones at all.

Now, then, when the brood-chamber is full of worker-comb, unless you fill the sections full of worker-comb also, nearly all drone-comb will be built in the sections. It is conceded that drone-comb is not as handsome for surplus honey as the worker size. It certainly is not as strong for shipping—but all that amounts to but little, compared to the point that if there is any drone-comb in the surplus sections, it will be filled with drone-brood, unless a queen-excluding honey-board is used; and then, if it is only possible for the queen to pull and squeeze herself through the narrow passage-ways surrounded with metal, she will do so. The bees must urge her up, or convey to her the knowledge that there is drone-comb above. This is true of all hives, of all shapes or depths, and as plainly possible with one depth as another, provided, as stated, there is no drone-comb in the brood-chamber.

HONEY-COMB IN THE STOMACH.

Let me say to Mrs. Harrison, that, in one respect at least, I have a stomach just like hers. It will not digest beeswax at all, and it will not digest honey-comb any more than it will beeswax; but any perfectly smooth, indigestible material, like comb or wax, is most wholesome, and greatly aids in digesting other food. It is especially beneficial even in connection with warm biscuit, because it mixes up with the biscuit material.

The only hard substance to digest, is something that *will* digest, but will not do so readily. Anything that will *not* digest at all, produces no strain upon the digestive system. The conclusion is, that comb honey is the most digestible food in the world. If the honey is thoroughly ripened by the bees (that is, digested), how readily it assimilates, the bees having done the work. The comb being wholly indigestible, no effort is made by the system to digest it, and so it passes along without harm; but with the beneficent result of aiding the other substances in the stomach to digest more readily, making avenues, as it does, for the acids and gastric juices to thoroughly mix up with the food.

Practice has proven the above long ago; and what is practically true, is never theoretically false.

Dowagiac, Mich.

QUEEN-CAGE.

Further Suggestions About the Pratt Queen-Cage.

Written for the American Bee Journal

BY E. L. PRATT.

For the benfit of those interested in the queen-cage described on page 800 of the AMERICAN BEE JOURNAL for 1889, I will say that the cages should be provisioned, corked, and the screen-cloth tacked on before the queens and attendants are put in.

The cover should be fastened at one corner with one ⅜-inch wire nail, and turned at right angles with the cage, in such a manner as to bring the ventilating hole directly over the center apartment, thus making a convenient thumb-hole through which to slip the queens and workers, one by one.

The lid can be turned back into place, and tacked fast, as soon as all the queens have been taken out.

This cage is receiving many words of praise, and several bee-keeping friends have suggested little improvements that will make it the best shipping and introducing cage in use, I think. Mr. Doolittle suggests wrapping the cages, and I have had a neat, colored wrapper printed. On one side are lines on which to write the address; on another, the shipper's card, and the postage stamp, and on the opposite side are directions for introducing. All the samples which I send out now are in these wrappers.

Our bees are wintering nicely, since there has not been a day, hardly, up to Jan. 1, that they could not fly. There are very few dead bees on the bottom-boards. We have had a *very* open winter in the East, so far. Christmas day was like balmy spring. There is no breeding, as yet, in any of the hives.

Marlboro, Mass.

HONEY-DEW.

It Crystallizes on the Incense Cedar Trees of California.

Written for the American Bee Journal

BY S. L. WATKINS.

In the Sierra Nevada Mountains, after a dry season, it is nothing uncommon in the incense-cedar woods, to see the twigs and branches of whole forests glistening with crystallized honey-dew. This honey-dew exudes from the trees for about six weeks, at the end of which time it crystallizes, and looks like drops of granulated sugar on the under side of the limbs. After repeated experiments, I have found that it is caused by the work of *aphides*.

The incense-cedar trees grow in certain sections of the country, and they seem to be a general favorite for the *aphides* to work on; common cedars they will not touch, as I have never found any trace of their work on them.

This honey-dew, before being gathered by the bees, has a slightly cedary taste, not at all unpleasant, like ordinary honey-dew, but, on the contrary, very agreeable. I have had colonies store 150 pounds of surplus comb honey in six weeks, all gathered from this source; the combs being of snowy whiteness, and the honey the thickest that I have ever seen. After the *aphides* stop working, the honey-dew begins to crystallize, and I have sometimes found a couple of spoonfuls of fine sugar, on a single twig twelve inches long, already crystallized, and refined without any care or labor at all.

I am informed by reliable parties, that in certain sections of Oregon, they have immense crops of honey, sometimes—all gathered from honey-dew, and the honey is all first-class, too. In the valley counties of California, the white-oaks furnish unlimited quantities of honey-dew; the honey is poor in quality, of a slightly bitter taste, but makes an excellent winter food for bees in this climate.

As there is an illimitable extent of white-oaks in the central portion of this (El Dorado) county, Mr. H. G. Hubbard, of this city, conceived the idea of transplanting some of the white-oak *aphides* of the Sacramento Valley, into this section of the country, so as to give the bees something to work on in the fall of the year, to keep them out of mischief, and at the same time supply them with necessary winter stores. He experimented considerably in this direction, but was never successful in getting them propagated on the white-oaks of this vicinity.

Climatic influences, I suppose, cause them to live in certain sections, and die in others. If we had severe winters here, like there are in the Eastern States, we would not try to propagate this species of *aphides*.

Placerville, Calif.

BEE-KEEPING.

Pushing the Bee-Business—The National Flower.

Written for the American Bee Journal

BY REV. STEPHEN ROESE.

The writer notices with pleasure, from reports of bee-keepers, the bountiful harvest which many expert bee-keepers have gathered during the season of 1889; and judging from the early appearance of price-lists for the coming season, great efforts are being made in all parts of our country to push the art and industry of bee-keeping the coming season, with energy and enterprise.

My efforts during the past season have not been crowned with success, for want of supplies in the time of need; many swarms of bees, and more than one ton of honey was my loss, in consequence. From 78 colonies, spring count, I increased to 140, and took only 900 pounds of comb honey, in one-pound sections, and 1,600 pounds of extracted honey—a report which I have felt ashamed to give before but not discouraged, I look forward, if life and time shall last, for better days to come.

LITTLE HONEY FROM GOLDEN-ROD.

I have closely observed all the testimonies in the AMERICAN BEE JOURNAL for and against golden-rod—that sweet and lovely flower, which greets the passer-by from every roadside, hedge and fence-corner, with a sweet smile, when all other flowers of early and mid-summer have faded; and welcomes, besides, the millions of nectar-gatherers to feast on its sweets, which it so bountifully unbosoms during favorable seasons. In my estimation, golden-rod well deserves to be styled "America's National Honey-Flower," although the past season it has furnished bee-keepers very little, if any, honey. For my part, I could not show one pound of clear golden-rod honey, for in this locality the season was too dry. Its bloom proved of short duration, but the honey-gatherers were not slow in recognizing golden-rod as the "national honey-flower," by visits from early morn till night.

Maiden Rock, Wis.

GOLDEN-ROD.

This Plant Considered as a Honey-Producer.

Written for the American Bee Journal

BY E. K. DEAN.

I have read with considerable interest the reports *pro* and *con* on this subject, from different parts of the country, as published in the AMERICAN BEE JOURNAL during the last two or three months—more particularly as I have for a number of years heard its merits as a honey-yielder highly extolled by some who write for this valuable bee-paper, and so I have been looking in vain to see these reports verified to much extent, till this year.

Owing to the abundant summer rains, the golden-rod had made an unusually vigorous growth, and was in a good condition, with its luxurions bloom, to produce a fine flow of honey, if ever. Then Sept. 1st came with two weeks of as fine weather for the secretion of nectar as I ever saw. Owing to the partial failure of a honey crop in this section previous to this time, a good many hives were still provided with cases of sections in different stages of completion, many containing no honey at all.

During this period the bees were on a "grand rush," and I never knew honey to come in any faster during the most prolific yield of white clover (our principal source here); and to walk through the apiary after sundown was anything but pleasant, for I never yet met one who admired the odor of this plant, or rather blossom; and it seemed as if the honey, by its strong smell, must have a double or triple extract of this perfume. In short, it was very rank and unpleasant. I knew there was to be inevitably a large crop of golden-rod honey, and I feared that its value, as a selling article, would be slim.

Well, every section was completed, and every available place in the hives, not yet occupied, was filled, and a number of colonies, which had a space back of the division-boards, built new combs and filled them to the roof of the hives.

This is the first time in my experience, that I have comb honey to sell, entirely of golden-rod, and I found that the rank and disagreeable odor soon disappeared, and although very dark in color, it is fine in flavor, and very thick and rich—so thick, in fact, that it is next to impossible to extract it clean from the combs.

I supply my home market, and at this season I sell considerable extracted honey for buckwheat-cakes, going from house to house, taking orders from samples which I carry in ordinary fruit-cans. At first sight, a good many will say, "Oh, I don't want any of that dark honey!" I reply, "All right; its all the same price; suit yourself." But I urge them to sample each variety, after which some will say, "I declare, I believe the dark is the best, after all;" and so the result is, I can sell just about as much of the golden-rod honey as of the white clover.

One thing which, to me appears strange, is that although this plant is indigenous to such a large radius of country, still it reports invariably a scanty or barren crop in the Western and Middle States; while the "busy little bee" revels with delight among its golden plumes, under proper atmospheric conditions, along the hills and valleys of New England.

Sharon, Conn.

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CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Jan. 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Denver, Colo.

Jan. 20, 21.—Eastern New York, at Albany, N. Y.
W. S. Ward, Sec., Fuller's Station, N. Y.

Jan. 21-24.—Minnesota State, at Excelsior, Minn.
Wm. Urie, Sec., Minneapolis, Minn.

Jan. 22.—Vermont State, at Burlington, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Feb. 5-7.—New York State, at Rochester, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Earned an Interest in the Union.

My bees earned an interest in the Bee-Keepers' Union the past season. I obtained about 25,000 pounds of honey, and increased my apiary 95 colonies more, making about 235 colonies now in winter quarters, in good condition. Later I will try to send a full report of this year's crop.

N. Staininger.

Tipton, Iowa, Dec. 30, 1889.

Gathering Pollen and Honey.

This December is the mildest in Georgia for several years, the mercury at noon being from 70 to 80 degrees, and early in the mornings at 60 degrees. We had one cold spell in November, and heavy frosts, but vegetation is not killed yet. The bees are flying every day, and bringing in pollen, and have gathered some honey this month. They seem to have some doubt about the weather, but some are rearing brood, anyway. I now have 80 colonies in fine condition.

R. H. Campbell.

Madison, Ga., Dec. 27, 1889.

Farmers' Institute—Almanac.

We had a splendid time during the two days' session, in December, of the Farmers' Institute here. Among the important matters discussed was apiculture, which was interesting; but the time was so limited, for just as the subject came to a "welding heat," the next on the programme was called for. On the second day, taxing bees was discussed.

The Honey Almanac is a grand success. It opens the way through a perfect wilderness of old-fogy notions. By it we do not guess, but know, that honey should not be regarded as a luxury, but as a staple article on every man's table, the whole year around. We need a bee-keepers' institute in this part of the country, and must have it, for the purpose of educating in a practical way.

G. B. Olney.

Atlantic, Iowa.

Wintering Bees—Honey-Plants.

I would like to ask some questions through the American Bee Journal, viz:

1. Can bees be kept in a house built on top of the ground, with double walls all around, and filled in between with sawdust, chaff, or fine straw tramped in hard or close, in the climate of central and northern Minnesota?

2. Which is the best kind of bees, the pure Italians, the pure blacks, or the hybrids?

3. I put my bees into a bee-house dug 6 feet in the ground, boarded up, and covered with 2 feet of hay, and one foot of earth, then 2 feet of fine straw and chaff over the soil or earth. I then took off the covers, and placed the hives on a shelf, and put on one thickness of coffee-sacking for a blanket; then put on top of each hive a 6-inch box (open) filled with forest leaves, pressed in. Do you think that they will do well prepared in that way? They have plenty of honey.

4. What kind of honey-plants will do the best in northern and central Minnesota, to plant for bee-pasturage?

Litchfield, Minn. D. B. Cassady.

[1. Yes; many keep them in above-ground cellars, but they are not as good as those below the ground, unless extra care be taken in building them.

2. We think that the pure Italians are the best. Read Prof. Cook's article on page 39 of this issue.

3. The bees ought to do well in that repository.

4. Sweet clover will probably do as well as any. The territory is so large and varied that it would be difficult to give definite instructions that would fit such a large tract of country.—Ed.]

No Fall Honey Crop.

My report for 1889 is rather slim. I started with 21 colonies, and increased them to 43, and took 1,200 pounds of surplus honey, all from white clover and basswood. Fall honey was a total failure.

F. M. Merritt.

Andrew, Iowa, Dec. 28, 1889.

Spring Weather in Mid-Winter.

I have 70 colonies in the cellar, and all seem to be doing nicely. I left one weak colony out, not thinking it worth putting in the cellar. Another hive was left out, that the bees had left quite a quantity of honey in. The weather has been so warm that the weak little colony has carried all of the honey out of the forsaken hive. Some have secured plenty to carry them through the winter, and seem active and strong. I am going to leave them out, and see what the result will be. Since the fall rush of honey, the price has depreciated somewhat, and I am selling mine at 13 cents. There is no frost in the ground, and we are having spring weather.

J. M. A. Miller.

Galva, Ills., Dec. 28, 1889.

Keeping Bees Cool in the Cellar.

The weather for four weeks has been so very warm that it is difficult to keep over 156 colonies of bees in the cellar cool enough. Indeed, I do not see how we could do so, if the cellar was not well ventilated, and kept perfectly dark, and the brick floor wet with water, when at the highest temperature. To-day the mercury stands at 57 degrees, bees are roaring warm, and yet they have not flown out very badly, because the cellar is so well ventilated that the air smells pure; yet it has been too warm to sweep up any dead bees, as it seems to arouse the bees if we stand near an entrance, or jar the hive in the least. They seem to stand ready to pour out. If one could have told me that we were going to have such a warm spell, it would be better to have the bees out-of-doors, or have left out part of them till later. We do not need to build up a sale for our honey, as we can dispose of it faster than we can get it ready for market. We had 13,000 or 14,000 pounds of comb honey, and could sell twice that amount if we had it for sale.

Mrs. L. C. Axtell.

Roseville, Ills., Dec. 24, 1889.

Results of the Season.

My report for the summer of 1889 is as follows: I commenced the season with 27 colonies of bees, increased them to 62, by natural swarming, and secured about 800 pounds of comb honey in one-pound sections. The most of it was white clover honey.

S. Burton.

Eureka, Ills., Dec. 30, 1889.

Fine Weather—Bees Flying.

The weather is fine, and bees are flying. Although I have 110 colonies in the cellar, I have 75 colonies on the summer stands yet; but, upon examination, I find that although heavy in the fall, they are getting lighter fast, and if such weather continues, I will have to feed before spring, as they consume twice as much as those in the cellar; therefore I will put all into the cellar.

Muscatine, Iowa. John B. Lindle.

Large Apiary in Florida.

The past has been a very good season here. I had one colony on the scales from which I extracted 130 pounds, and it is not one of the best in the apiary, but may be above the average; it is now strong in bees and honey. The bees are now carrying in honey and pollen. We (Alderman & Roberts) have 1,200 colonies of bees in good condition, and the prospects now for a good crop were never better since I have been in the business, which is 13 years. We have two 4-frame extractors that are just the thing; but we will have to add another, and I think that we will try the 8-frame extractor. I want to prepare to take 40 barrels of honey a day; as the flow here is short, we have to get everything in place, and be ready for the work. I would not be without the American Bee Journal for $10.00 a year.

J. B. Roberts.

Wewahitchka, Fla., Dec. 30, 1889.

How to Pronounce "Carniolan."

I was very much amused in reading in the always most welcome American Bee Journal (page 731, for 1889), the question how to pronounce the word "Carniolan." The editor is quite right when he pronounces it with a big O; but it is not the German, but the Italian, or rather the Latin name, and as Americans write, it is more an English word, than anything else. The Carniolan Dukedom is called "Ducado del Cragno;" the bee, "Ape Cragnolina," in our local dialect. In Italian we say, "Ducato Carniolino," "Ape Carniola," or Carniolina (Apis Carniola); in German we call it "Herzogthum Krain," "Krainer Biene:" in the Slavonian language (a slave dialect), "Krajnska Voivodina," "Krajnska pcela" (pronounce Pchala, the first *a* like in ale). It will be seen that Mr. Pratt's German, who lived for sometime in Austria, had hardly any occasion to call the bees by the Anglo-Latin name, first given them, if I am not mistaken, by Frank Benton, who never heard that name before, I am sure.

A. Schœder, Jr.

Trieste, Austria.

Season's Experience and Results

I commenced the season with 53 colonies in good condition, but the cold, wet weather kept the bees from work until the white clover commenced to blossom. The colonies kept very strong in bees, but light in honey. After the honey-flow commenced, they filled up very quickly, and commenced swarming. I tried all the plans that I had heard or read of, to keep down the increase, but in spite of my plans and work, they increased to 93 strong colonies and 17 nuclei with queens. The nuclei I have put into the cellar, and the 93 colonies are on the summer stands. I will leave them there until the weather is colder. I wintered my bees in the cellar last winter, without the loss of a colony. This year I secured 4,160 pounds of comb honey, and 2,700 pounds of extracted. I have about 1,200 pounds of comb, and 400 pounds of extracted honey, on hand. What I have sold, netted me 12 cents per pound for comb, and 8 cents for extracted. William Hill.

Prophetstown, Ills.

Honey in Good Demand.

Bees did well in this section the past season. Mine averaged 107 pounds per colony, spring count, almost all being extracted honey. Fruit was scarce, and honey has been in good demand all along. Golden-rod was very abundant here, but the weather was very dry, and the bees got no honey from it, though in some years they do gather from it. John Dewar.

Tiverton, Ont., Dec. 30, 1889.

Bees in Splendid Condition.

We wintered 58 colonies without loss last winter, and the average amount of honey taken was 100 pounds per colony, all extracted except 1,000 pounds in one-pound sections, and 500 pounds in frames for feeding in the spring. We put 87 colonies into the cellar on Nov. 24, in splendid condition. The temperature varies but little from 50 degrees. We sold 15 barrels of honey to a cracker factory, at 5 cents per pound for dark and 6 cents for light honey. We get 8 cents at retail. We have 600 pounds of comb honey in one-pound sections, and can get only 10 cents a pound for it. We are holding it for a higher price. Our market is full of 7 and 8 cent honey, and grocers are selling at 10 cents a pound.

S. J. Church & Son.

Cedar Rapids, Iowa.

Some Swarming Difficulties.

I bought one colony of bees in June, 1888, and as there was no honey-flow, and the bees did not swarm, on the first week of August I divided the colony and introduced a new queen; on Nov. 28, I put the hives in the cellar, with a vague guess that the bees had honey enough to carry them through. My guess might have been a long way from right, but it happened not to be; with the loss of about a dozen bees to a hive, I put them out early in March. On May 25, 1889, they clustered on shrubs, on fences, on tops of trees, and—well, I do not remember now where they did not cluster. I could manage them on the low places, but, after an exceedingly lively summer, I must admit that I cannot climb a tall oak and bring down the bees.

I now have 5 colonies, having sold one, and lost two—by the sheerest carelessness. I sigh as I think of those wild climbs after clusters, as I put the problem: "If 2 colonies can put their keeper through such paces, what will be the result of owning 5 colonies?" How can this swarming business be managed, without climbing trees, or loss of colonies? I tried clipping the queen's wing. This works all right for that colony, but if one allows an increase of one swarm per colony, then what is to be done with the young queen whose wing dare not be clipped before she lays; and that one will not get much chance to be clipped after she lays, as she will pick up her followers and hie herself over the hills, in about eight days after the first colony swarmed?

I propose to take my bees out into a linden grove, for a "camping out" vacation, just at the time that the trees are in bloom; but what am I to do with run-away bees, among those monsters of the forest? Will some one kindly offer some helpful suggestions, before the "swarming time" comes on? Kit Clover.

Dubuque, Iowa.

Bees Flying on Christmas.

This has been a very poor season for bees in this vicinity. I commenced with 120 colonies, spring count, increased them to 175, and my honey crop consists of 1,100 pounds of extracted, and 2,000 pounds of comb honey in one-pound sections. It was altogether too wet a season, and it still continues to rain. Christmas day was observed by the bees—they had a great frolic in the open air, the weather being fine and warm, not a particle of snow in sight—a thing not very often experienced in this part of New York State. C. D. Battey.

Peterboro, N. Y., Jan. 1, 1890.

A Soft and Rainy Winter.

The season here has been very good. I commenced in the spring with 11 colonies, two of which were very weak. I increased them to 20 colonies, and sold 2 swarms just as they issued. I took off 750 pounds of comb honey, and 100 pounds of extracted. I have sold almost all of it at 10, 12½ and 15 cents per pound. We have had a very soft winter so far. I put my bees into the cellar on Nov. 22, and I have had some trouble to keep them quiet. The temperature has ranged from 30 to 60 degrees out-doors, and from 45 to 55 degrees in the cellar. I had chaff cushions on the hives, the same as used out-doors heretofore, but I took them off, and now they have just one thickness of burlap on them; they are more quiet, but I shall put on the cushions again on Feb. 1. We have had plenty of rain the past fall, and this winter, and it is still raining this morning.

A. Sherington.

Dutton, Mich., Jan. 1, 1890.

Fair Season for Bees.

The past season was fair, but the spring was backward. We had late frosts that put the bees back in breeding. I commenced the season with 25 colonies, increased them to 40, and doubled back to 33 in the fall. I obtained between 800 and 900 pounds of honey, which was very thick and rich, about half of it being extracted. A couple of colonies that I gave plenty of room to work on combs, did not swarm, but stored nearly 100 pounds of extracted honey, each, besides leaving plenty for winter. I think that by giving them plenty of room, and but little drone-comb, they will not be inclined to swarm much. I had more trouble this year in getting supplies, than I ever had before. This winter has been too warm for the bees in the cellar. I put mine in on Nov. 5. They are quiet now. I opened a window and let in the cold air, but before I opened it the temperature in the cellar was about 50 degrees all the time, and the bees kept coming out of the hives. Wm. Cleary.

Algona, Iowa, Dec. 31, 1889.

Centrifugal Comb-Filler Feeder.

I will describe a centrifugal comb-filler of my own invention. With it I can put honey into the combs as fast as any one can take it out with an extractor. I can leave the brood-chamber empty any amount that is necessary, or every cell. This feeder has several advantages over other ways of feeding. I can feed quickly with it; it does not stimulate breeding so much as other ways of feeding, and I am not burdened with a multitude of feeders to store away. By putting combs in at night, the bees get them cleaned up by morning, so that it will not excite robbing. It also relieves the bees from a great amount of labor. Well ripened honey, or syrup, can be used. All that the bees have to do, is to cap it over. It is about the size of the frame that holds the combs for extracting, therefore it can be put into the extractor, so as to give it the rotary motion, which produces the required centrifugal force. The machine is so simple in construction that any one can operate it. I have used it for six years, and know its merits. I did not get it patented, not being in the supply business, and I have no pecuniary interest in it, save for my own use.

G. W. Leonard.

Good Report for the Season.

I have 17 colonies, having commenced with 6 colonies in the spring of 1889. Of one colony I kept a special record; it came out on June 6, and I put it into an empty hive, with 15 frames, 12x12 inches, also a second story just as large as the hive. I took out 71 pounds of as nice comb honey as I ever wish to eat, in the latter part of August; in October I took 12 pounds more, making in all 83 pounds, besides the hive is full. I have considerable faith in a plenty of stores, for what is left I can extract next spring, arter apple bloom. How is that for a swarm that never saw foundation—although I think they might have done better if they could have had it? My bees are in the cellar—the only trouble I now experience is, I have to watch them, for they get too warm sometimes, as the weather has been so mild for the last two weeks.

Bees did splendidly here this year. It just seemed as if white clover would never cease blooming—in fact one could find blossoms from May until September; and then, the oceans of golden-rod, marsh asters, horse-mint, catnip and many other plants! I have noticed one flower that the bees do not work on; it is the dog-fennel. We had quite a patch near our house, and I never saw any bees working on it, although I looked several times.

Mrs. Emily M. Casbon.

Valparaiso, Ind., Dec. 14, 1889.

Sweet Clover—Mild Weather.

I send a sprig of a plant that I gathered a few days ago; bees were working on it. It is a shrub that grows from 10 to 12 feet high, and is called "bee-weed" here. It blooms almost continuously in the summer, if rains are frequent, and yields largely of very fine, white honey. We are having remarkably mild weather here, even for Texas. I was over in the valley of the Colorado river a few days ago, and saw bees working on a kind of sage. All colonies are in splendid condition, and we hope for a favorable season during the year 1890. Seventy-five pounds per colony was the average the past year. Our bees are nearly all blacks, and I find them fully equal to the yellow races here. H. S. Gravenor.

Cypress Mills, Tex., Dec. 31, 1889.

[The plant is sweet clover, and is an excellent honey-producer.—Ed.]

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BEE JOURNAL

ALFRED H. NEWMAN,
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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	1 00	
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Cook's Manual (1887 **edition**)	2 25	2 00
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What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

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51D26t 1m1y.

Our Premium-List Supplement describes many articles of great merit, and that are useful in every family. We have carefully selected them to offer as premiums for getting up clubs for our JOURNALS. We do this to *induce* our friends to devote a few hours of labor for us. Our JOURNALS are first-class in their lines, and are needed everywhere. We do not want any one's labor without remuneration, and the articles offered will pay for the labor of getting up clubs, and thus the arrangement will prove to be for our mutual advantage.

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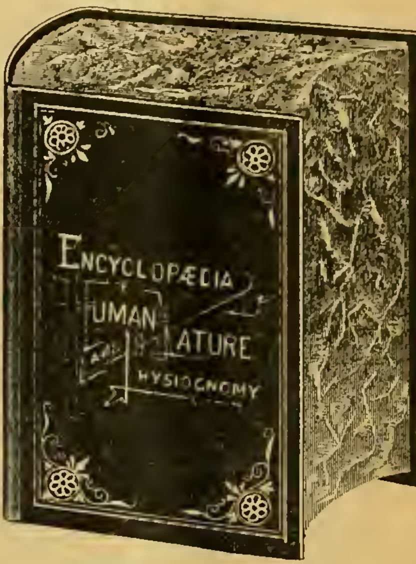

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HONEY AND BEESWAX MARKET.

DETROIT, Dec. 20.—Comb honey is dull and lower, now quoted at 12@14c. Extracted, 7@8c., with few sales. Beeswax is now in good demand, at 24@25c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, Dec. 27.—White clover 1-lbs., 12@13½c.; basswood, 11@11½c.: buckwheat, 8@10c. Extracted, 6½@7½c. Beeswax, dark, 23@24c.; bright, 25@26c.
S. T. FISH & CO., 189 S. Water St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.
R. A. BURNETT, 161 S. Water St.

DENVER, Dec. 28.—Comb, 1-lb. sections, 1st grade, 13@15c.; 2nd, 12@14c. Extracted, 6@7c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Dec. 24.—Demand is light and prices lower, owing to bee-keepers offering honey at 11@12½c,, delivered throughout the West. Very fancy 1-lbs., 12 in a crate, 13 cts.: good, 12½c.; dark, 10c. Two-lbs., white, 12c.; dark, 10c. Extracted, white, 7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey. Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

MILWAUKEE, Dec. 27.—Market dull; only best grades demanded. White 1-lbs., 13@14c.; 2-lbs., 11@12c.; dark 1-lbs., 12@13c.; 2-lbs, 10@12c. Extracted, white, in barrels, 7@7½c.: in ½-barrels and kegs or tin. 7½@8c.; dark, in barrels, 6@6½c.; in kegs, 6½@7c. Beeswax, 22@25c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Dec. 30.—Demand for comb honey has almost ceased, and choice lots can be picked up at almost any price. Extracted is doing fairly well. Basswood and California, 7½c.; orange-bloom, 8@8½c.; buckwheat, 6c.; Southern. 70@75c. per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

KANSAS CITY, Dec. 27.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

* * *

☞ Some have requested us to print a card on a less number than 100 Honey Almanacs, and we have concluded to accommodate them. We will furnish 25 copies with card printed on the first page, **postpaid**, for $1.10; 50 copies for $1.70; 75 copies for $2.30. See prices for more on the page 20.

* * *

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

* * *

☞ Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

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	Price of both.	*Club.*
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Advertisements.

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For May delivery, 500 Colonies Italian Bees in Simplicity or Langstroth Hives. State number and price, on Cars. GEO. E. HILTON,
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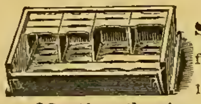

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Beeswax.—We will pay **24 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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SECTIONS $3.00 per 1,000. Foundation, Alsike Clover Seed and Japanese Buckwheat, cheap as the cheapest. Special prices to dealers. Send for our FREE PRICE LIST. **M. H. HUNT,**
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DURING the months of October, November and December I offer a **DISCOUNT of 10 to 6 per cent.** for GOODS purchased for next season's use.

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We can promptly furnish any quantity of White, Alsike, or Sweet Clover Seed at the following prices, which include sacks and cartage:

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Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature' Ways ; by

G. M. DOOLITTLE,
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In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid ; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.75 ; or the two Journals and the Book for $2.50.

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CARNIOLAN QUEENS!

The co-partnership of ANDREWS & LOCKHART is now DISSOLVED, and the senior partner will give his entire time next season to the breeding of **Carniolan Queens and Bees,** and will sell, after June 1, 1890, Untested Queens at $1.00 each; Tested, $2.00 each; those carried through the winter, at the 15th of May (and are Tested) $2.50 each.

☞ Circulars will be out about Feb. 1, 1890.

JOHN ANDREWS,
51Dtf PATTEN'S MILLS, WASH. CO., N. Y

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Jan. 25, 1890. No. 4.

Still Sick.

The editor is still confined to the house, and most of the time to his bed. The "grippe" has disappeared, but as is usual in the majority of the cases with this malady, it has left him a legacy—in the present instance it is a congested liver and stomach. At the present writing, he is gaining steadily, and if no further complications arise, he will be at his post of duty before another number of the BEE JOURNAL goes to press, and his handiwork will be seen, as of old, upon this page.

The Business Department has received no interruption during the prevalence of this Russian epidemic, as the Business Manager lost the combination, and failed to receive his share. All matters of business have received, and will continue to receive, the same prompt attention that has characterized its affairs in the past.

ALFRED H. NEWMAN,
Business Manager.

The Best Literary Journal.

This is what Mr. Geo. E. Hilton says of our ILLUSTRATED HOME JOURNAL, when sending his subscription for another year:

> You are publishing the best literary journal that comes to my desk, and I am just deluged with reading-matter; but if it all had to stop but one, the HOME JOURNAL would be the one that would be continued. Would to God that we had more of such healthful reading-matter, and less of the "dime novel" sort. If you get what you deserve, it will be "success."
>
> GEO. E. HILTON.

Thanks, Friend Hilton. That is a pretty strong endorsement, but we mean to merit just such commendations, by supplying reading-matter that is pure and inviting—such as may be safely put into the hands of every member of the family. The ILLUSTRATED HOME JOURNAL is clubbed with the AMERICAN BEE JOURNAL for only **$1.50.**

QUERIES and REPLIES.

Spreading the Frames in Wintering Bees.

Written for the American Bee Journal

Query 681.—1. In wintering bees out-doors, would it be any advantage to the bees, to remove one frame, and spread the remaining nine further apart, to allow more bees between each two combs? 2. I have several colonies of bees in 10-frame Langstroth hives, with only nine combs in each. The nine combs so widened out that there is not room for the tenth frame. Will it make any difference with the bees, or the honey crop? If so, what?—Mo.

Where combs are spread 1½ inches from center to center, I believe that spreading the comb is worse than useless.—J. M. HAMBAUGH.

I have tried your plan, but I can see no difference, and now I leave all the frames in the hive.—H. D. CUTTING.

They will certainly winter better with only 9 frames. All our colonies are in hives with frames 1½ inches apart.—DADANT & SON.

1. No. It would be a disadvantage. 2. There is less room for brood, and in the brood-nest combs are liable to be built between the frames.—M. MAHIN.

If the frames are well filled with honey, it might be an advantage to slightly spread them. *No* spreading should be done during the working season.—J. P. H. BROWN.

While it is not necessary to spread the combs as you suggest, it does no harm, and may be a slight advantage. I usually spread the frames a little.—A. J. COOK.

1, Some think so; I do not practice it. 2. There will be no difference with the bees, but 8 frames will give you better results in honey, if the hive is contracted to a suitable width for them.—G. M. DOOLITTLE.

1. Yes. 2. Yes. It will not be as good in summer as a 9-frame hive. When the frames are so far apart, the bees frequently build pieces of comb between them, and there is not so much breeding-room, and room for the bees to loaf and go into the super.—A. B. MASON.

1. I think not. Nature indicates that the combs should be from 1⅜ to 1½ inches apart from center to center; and to spread them to an unnatural distance apart, must necessarily be an experiment. 2. I know by experience that bees will winter all right on 9 frames, divided in a 10-frame hive. But this is a rather light "spread."—G. W. DEMAREE.

1. Some say so. 2. Yes. Within proper limits, the closer the combs are together, the more brood the cluster will cover in the spring, and consequently the more bees in June; and also the less room there will be for bees to lounge in the brood-chamber, and the more will be crowded into the sections, and consequently the more surplus there will be.—R. L. TAYLOR.

1. Mr. Langstroth thinks that it is. I have never thought the advantage enough to pay for the trouble of changing twice a year. 2. If combs are spread too much in the spring, bees cannot cover so much brood. I think that combs can be kept a little straighter if tolerably well crowded.—C. C. MILLER.

1. I think that it would, but it is a good deal of work, if one has many hives. 2. I have used 10-frame Langstroth hives for many years, with only 9 frames, and I never could see any difference in the yield of honey, between them and the 10-frame hives.—C. H. DIBBERN.

1. I hardly think that it will pay in Missouri. In colder climates it might be an advantage. 2. It will make no difference with the bees, but I think that it will with the honey crop. There is too much room in the brood-chamber for storing honey that ought to go above. In the spring, shave off the comb until the other frame will go in. Crowd them so closely together that the frames will not be more than 1⅜ inches from center to center.—EUGENE SECOR.

1. More space between frames in winter than in summer, is desirable; but if 50 colonies or more are to be opened, and the combs spread, it will not pay to do it. Narrow spaces, say 1⅜ inches, in summer, tend to straight, even brood-combs, lessen the storage room in the brood-chamber, and put more honey in the supers.—J. M. SHUCK.

To take the frame from the center of the hive, and leave the space all in one place, not disturbing the other frames, would, I think, be good practice; but, better still, to place a "Hill's device" above the frames. In working for comb honey, I have always considered 8 frames in the brood-chamber a plenty—*sometimes*, too many.—MRS. L. HARRISON.

1. I use the 10-frame Langstroth hive for wintering, and remove one frame and spread the others. I deem this to be about right. 2. I prefer a Langstroth hive 14¼ inches wide, carrying 10 frames. In summer, I use a ½-inch dummy also, spacing close. In winter I remove one frame and the dummy, spacing 9 frames evenly. This works better with me than any other plan that I have tried. Space will not allow theoretical reasons, so I state the facts only.—J. E. POND.

1. Some have so claimed, but it is my humble opinion that there is no foundation for the claim. 2. It will make a difference with the honey crop, as it is impossible to rear as many workers where the combs are placed too far apart, as where they are spaced the proper distance apart, or about 1⅜ inches from center to center of the combs.—G. L. TINKER.

1. Perhaps it might, but I do not do it, and very few bee-keepers do do it, and yet the theory is 15 years old, and has been tried many, many times. Space between the combs does not cause or prevent bee-diarrhea. 2. Your bees are in just as good condition to winter, as if they had 10 frames; but the combs are too far apart for the best results in summer. Next spring, shave off the projecting cells (which would be honey-cells), shove up the frames and put in another frame, if you want the very best results.—JAMES HEDDON.

The sreading of the brood-frames for winter is an old theory, but one that will hardly pay for the trouble. The advantage (if there is any) is very slight, while the disadvantages are many.—THE EDITOR.

How to Bleach Common Yellow Beeswax.

Written for the American Bee Journal

Query 682.—What is the best and quickest way to bleach common yellow beeswax?—Tex.

I do not know.—M. MAHIN.

I do not know.—J. E. POND.

I do not know.—J. M. HAMBAUGH.

Ask the wax-bleachers.—R. L. TAYLOR.

I respectfully submit this to Messrs. Dadant & Son.—EUGENE SECOR.

What do you want to bleach it for? If you want only a little, melt up some white comb.—C. C. MILLER.

The color can be improved by running it through the sun wax-extractor a few times. —C. H. DIBBERN.

Put it in the sun in thin strips, when the sun is not hot enough to melt it. Some yellow wax *never* bleaches.—DADANT & SON.

Why do you ask? The yellow is conceded by all good judges to be the best. I leave the answer to Messrs. Dadant & Son.—A. J. COOK.

Sheet it as thin as possible, and bleach it in the sun. Bleaching hardens it, and makes it unfit for use in the apiary.—J. M. SHUCK.

Use very thin sheets, and expose them to a strong light. You must use care, or the wax will melt.—H. D. CUTTING.

A good plan is to sheet it, and then expose the sheets to a strong light. Melting them, frequently hastens the process.—J. P. H. BROWN.

Why bleach it? I prefer to have it yellow. You can bleach it by a strong light, or in the sun, the wax being in thin sheets. —G. M. DOOLITTLE.

Make it into thin sheets, and bleach it with sun and dew, just as muslin is bleached. A lady at Rahway, N. J., accumulated quite a little fortune at bleaching wax, a few years since.—MRS. L. HARRISON.

I believe that there is some chemical process for bleaching, but I do not know what it is. If made into *very* thin sheets, and kept moist and in the hot sun for a few weeks, it will become quite white.—A. B. MASON.

To place it in the sunlight, I suppose. I know that you do not want bleached wax in connection with bee-keeping. Perhaps you want it for some outside purpose. —JAMES HEDDON.

I have given very little attention to the art of bleaching beeswax. My mother, many years ago, bleached beeswax by making it in thin cakes, and exposing them to the sun and dews. That was so long ago that it makes my head swim to "ketch on." —G. W. DEMAREE.

The method of bleaching wax is thus described by Pereiza: "This is effected by melting yellow wax (either in a copper vessel, or in a large vat or tub, by means of steam), running it off, while in a melted state, into a trough, called a *cradle*, perforated at the bottom with holes, and placed over a large water-tank, and one end of which is a revolving cylinder, almost wholly immersed in water. By this means, the wax is solidified, converted into a kind of ribbon, and conveyed on the surface of the water to the other end of the tank. These ribbons of wax are here lifted out, and conveyed in baskets to bleaching-grounds, where they are exposed to the air, sunshine and moisture, for one or two weeks (according to the state of the weather); being turned every day, and watered from time to time. The wax is then re-melted, re-ribboned, and re-bleached; it is subsequently refined by melting in water acidulated with sulphur acid.—G. L. TINKER.

Our Premium-List Supplement describes many articles of great merit, and that are useful in every family. We have carefully selected them to offer as premiums for getting up clubs for our JOURNALS. We do this to *induce* our friends to devote a few hours of labor for us. Our JOURNALS are first-class in their lines, and are needed everywhere. We do not want any one's labor without remuneration, and the articles offered will pay for the labor of getting up clubs, and thus the arrangement will prove to be for our mutual advantage.

CORRESPONDENCE.

SECOND PRIZE.

Extracted Honey — Production, Crystallization and Use.

Written for the American Bee Journal
BY G. P. HACHENBERG, M. D.

Honey properly extracted, is honey in its pure and perfect condition. When we speak of "extracted honey," we do not mean the article, simply as it comes out of the extractor, with its natural impurities of particles of wax, bee-bread, etc., but after it has passed through the necessary manipulations to make it an inviting article for the market.

The processs of extracting is simple, and generally well understood. The solid comb, before it is placed in the extractor, is uncapped with a suitable knife; but comb with a feeble support, or in a broken condition, is uncapped and extracted in lids of wire net-work. (See AMERICAN BEE JOURNAL for Dec. 5, 1888.)

The method of straining the honey after it is extracted, should be adapted to the condition of the honey, and other circumstances. A general error is to force it through a cheese-cloth, with meshes so coarse that the honey carries with it foreign particles, being left more or less in a cloudy condition, and is neither attractive to the eye, nor delicate to the taste. The desideratum to be obtained, is pure honey, and nothing else. This can only be effected by straining it through close, firm muslin, not by pressure, but by a slow process of percolation, the honey passing through the cloth in transparent crystal globules. (See AMERICAN BEE JOURNAL for Aug. 8, 1888.) For this condition of honey, I have not found to fail a good local demand and uniform price.

WHEN TO EXTRACT HONEY.

It is generally conceded to be indicated to extract when a comb of honey is capped. Then it is supposed that it is "cured," and fit for extracting. But as capping is not uniform, and extracting has to be done with many combs only partially capped, what have we to do with this mixture of honey that in the aggregate is only partially cured? This is an important question. But in the first place, what is "cured" honey? It is honey inspissated. Imperfectly cured honey, after straining, needs special attention; otherwise it may pass into acetic fermentation.

CURING THE HONEY.

There are three ways by which honey is cured, viz: 1. In the comb. 2. Soon after extracting. 3. In storage.

First, as regards the curing of honey in the comb, we might ask this question, "Will a long storage of honey in the comb improve it?" Certainly not, as, by age, the capping becomes impure and dirty, which in time will, to a more or less extent, penetrate the honey and give it a dark tint.

Second, the curing after extracting is to leave the honey in open vessels, not entirely excluding the air, but especially protecting it from the dust and light.

Third, the process of curing in storage takes place in barrels, after previous ripening; and is something like a limited vinous fermentation, or rather the development of a melic ether—a process of purification; for after such a storage for a month or two, the honey will wonderfully improve in its crystal appearance. By this method, the honey must be kept perfectly excluded from atmospheric air.

CRYSTALLIZATION OF HONEY.

Honey in barrels will tax our utmost ingenuity to keep it in a state of fluidity, and not allow it to turn into crystallization. Candied honey in the market is an abomination. Although to the eye of the bee-man it is indicative of its purity, the customer associates it with the dregs of a molasses barrel, and is consequently little disposed to buy it.

Crystallization of honey can be rectified, as well as prevented, by the application of heat. This will cause such a molecular change in the honey as to bring about the desired effect. But if the action of heat is too great, it will give the honey a dark tint, and tends, in a measure, to impair the deliciousness of its taste.

I have tried two ways to treat crystallization—first, of the honey in glass jars, and, second, as a prophylactic, in putting it up in barrels.

When the crystallization first forms in the bottom of the jars, I place about a hundred of them at a time in a metallic trough, in enough cold water to reach to two-thirds the height of the jars, and then apply the heat gradually until the crystallization is perfectly dissolved. This heat is not to go beyond 160°, Fahr., but may be held at that point until perfect dissolution has taken place.

To prevent the crystallization in barrels, the honey at the time of straining, is to be warm in temperature, but not hot. Even to strain the last half of the barrel warm, may suffice to secure a lasting fluidity of the whole.

The barrel is to be kept permanently air-tight.

HOW TO HEAT HONEY.

Sometimes I heat honey in the process of straining, at least when the weather is cold, and that part I expect to keep over winter. In an article published in the AMERICAN BEE JOURNAL of Aug. 8, 1888, I gave the form of a strainer, which is a muslin bag about four feet long, cone-shaped, hemmed at the opening over an iron or wooden ring, or hoop, to keep it open, and to receive hooks for suspension.

When the honey in the bag is too thick and cold, to strain freely, I slip into it a tin cone, nearly half the size of the bag, and fill it with boiling water; as the honey gets heated by induction, the straining goes on admirably. When the water loses its heat, it can be readily removed by a syphon, for which I simply use a common gum-elastic tube. Sometimes I place the vessel that receives the strained honey, over a kerosene stove, and lower the strainer with the honey into it, and heat carefully.

After the whole mass comes to a proper temperature, the strainer is drawn up by the aid of pullies, and the bag will soon become empty. By this method the temperature is regulated by the sense of touch. Much carefulness, however, must be exercised, for fear of over-heating the honey, and getting melted wax into it, and otherwise impairing its value. As I am writing this (Dec. 2, 1889), I have straining going on, by the aid of heat in my honey-house.

One difficulty in straining through fine cloth, is that it soon becomes clogged with fine particles of wax, etc. This will oblige us to keep several clean strainers on hand, and as one ceases to be serviceable, a fresh one must be used, leaving the honey that may remain in the partially-clogged one to percolate slowly, which may take several days before it is empty and fit for washing. The water in which the strainers are washed, may be used for making honey-vinegar.

It is an interesting experiment to extract honey and do crystal straining simultaneously, and with marked rapidity. This is effected by placing the comb, after it is uncapped, into a loose-fitting sack, made of thin, fine muslin, which is the strainer. The same centrifugal force that will throw the honey out of the cells, will force the honey through the strainer. These sacks are very easily changed and cleansed, and are not so quickly clogged as the cone-strainer, for in reversing them an opposite pressure has a tendency to clean the sides of the sacks, working the debris to the bottom.

Another method, is to extract honey in the ordinary way, and afterwards strain it by placing it (and even cappings) in tin boxes with straining-cloth on both sides, and strain by extraction.

TO BLEACH HONEY, AND TO CONVERT IT INTO SUGAR.

The question of bleaching honey has often come to my mind. As solar bleaching has such a happy effect on wax, I was led to try it on honey. So, for the double purpose of breaking down crystallization in jars, and bleaching in the same time, I filled a "solar wax-extractor" with jars of honey. The heat destroyed the crystallization, but the excess of heat darkened the honey, and virtually ruined it. This experiment shows how careful we must be in manipulating honey with heat. It likewise points out the method of evaporization for converting honey into an acceptable sugar, which should be done more by a tepid-fanning process, than by heat alone.

WHEN TO SELL HONEY.

Having secured the honey in a pure condition, either in bulk or glass jars, it is ready for the market. I neatly label the jars, only as the honey is ordered, to give them a new and fresh appearance. The human taste, in its craving for sweet and fat, is more active in the fall and winter, than in the warm weather. It is a physiological necessity. Advantage should be taken of this fact, to sell at the right season.

EXTRACTED VS. COMB HONEY.

Extracted honey will evidently remain a staple article in the market. Honey in comb, on account of the wax, is not as digestible, nor is it as free from impurities as nicely-extracted honey. As it is difficult to secure it always in a neat, uniform appearance, and requires much care in handling, it is not likely to be much longer furnished by extensive apiaries. I tried it for one year, as a novelty, and found the extra care and labor it required, made it less profitable than extracted honey at a less price.

MEDICINAL PROPERTIES OF HONEY-SPRAY.

It is well known in extracting honey, that an atomization of honey takes place, which not alone permeates the room, but at times arouses the whole apiary while the operation is going on. Persons with weak lungs, who work the extractor and inhale the honied air, are wonderfully benefited by it. Why does honey work as a pulmonary sedative, having no direct sedative properties in itself? The medical profession is fast drifting into the belief, that all pulmonary diseases are *maintained* through a micro-organism, in particular in phthisis, pneumonia, whooping-cough, etc.

Honey is an efficient antiseptic; but differs from all others in being void of irritating properties. When kept in contact with microbes, it is destructive to them, and it is their destruction that gives ease, and apparently serves as a sedative. This accounts why it serves as an efficient tropical remedy for many external diseases.

To atomize honey for any kinds of a cough, asthma, influenza, hay-fever, etc., it should be used in a warm solution, and applied by a steam atomizer. In certain cases, the honey-atomizer should be in the chamber of the patient in continuous action day and night.

From experience of personal benefit, I am greatly interested in this part of the subject—and I believe the bee-fraternity may confer a benediction upon mankind by reporting their experience and observation on this matter.

Austin, Texas.

SPRAYING TREES.

Some Foolish Advice Given by Editors.

Written for the American Bee Journal

BY S. I. FREEBORN.

> A law against killing our insect foes! Two generations of cultivators have been striving to discover methods or enact laws to enable man to harvest his share of the crops. And now comes that wise and good man, Prof. A. J. Cook, of Michigan, advocating a law to prevent fruit-growers from spraying blossoming fruit-trees with poisonous insecticides, because forsooth, the bees are also insects, and will go into the trees in search of honey. Verily, it must be that Prof. Cook was trained in an ultra "protectionist" school! The bees are all right, and honey is a good thing, but really, it seems as if the fair old rule of "the greatest good to the greatest number" were a just guide in such matters.
>
> Surely, fruit is of more importance than honey! If those busy workers must have Legislation, let us advocate a training school for bees, in which they may be taught to keep out of the orchards at the dangerous period. The fence question comes in here, too. Will not the law compelling an owner of domestic animals to fence them in, apply to apiarists as well as to other stock farmers? Is it more lawful for a bee to trespass, than for a cow or a pig?

The above item from the *American Garden*, by the editor, it seems to me, should be noticed. When the editor of such a publication as the *Garden*, advocates the promiscuous killing of bees, along with other insects, and that under the plea of "the greatest good to the greatest number," it is time that he was noticed by somebody. I think that when the learned gentleman informs himself of the facts in the matter of the relation of fruit-growing and bee-keeping, he will find that the interest of the two pursuits are closely identified.

Prof. Cook says, and no doubt truthfully, that the proper time to spray fruit-trees is just after the blossoms drop. This will save the bees, and will kill the codlin-moth, and destroy the leaf enemies of the trees. Prof. Cook is a close observer and experimenter, an accepted authority in all that relates to the insect world, and will not be troubled much by the disparaging remarks of the *Garden*. The greatest harm is, that those not acquainted with the facts will accept as truth such paragraphs as the one above referred to.

I am a horticulturist, myself, and expect to do some spraying of fruit-trees with insecticides, but shall wait until the bees are through with their mission on the trees.

The editor's pleasantries about teaching the bees to keep out of the orchards, and restraining them like cattle, is beneath the dignity of one that assumes to be a teacher in the noble profession of horticulture.

Ithaca, Wis.

[It is such pernicious articles as the one from the *American Garden*, that do the most damage. Editors, as well as bees, need to learn something, and the editor of the *Garden* is one of them.—ED.]

FOUL BROOD.

How to Cure and Detect Foul Brood in the Apiary.

Read at the Michigan Convention

BY HON. R. L. TAYLOR.

I have been requested by the authorities of this association, to prepare an essay on the subject of foul brood, and, in complying, I shall deal with the matter wholly from a practical standpoint. How its symptoms and progress appear to an average bee-keeper, and how it should be treated by the practical apiarist who is without scientific training or habits, are the points to which I desire specially to direct your attention.

I have had a somewhat intimate experience with the disease for the last three and a half years, among my own bees, and have had it there for at least a year longer. When first noticed, I think that about 5 or 6 colonies were affected. I say "noticed," for though I saw its effects, I did not recognize it as foul brood. Not till I had managed my apiary during a honey-flow, in a manner best calculated to disseminate the disease, by extracting, changing combs and feeding back, did I awake to the fact that the plague was not only present, but had a thorough foothold.

Almost from the start, I determined, at the risk of loss, as well of time and labor as of bees, to learn what I could of its character and workings; so while I tried to eradicate it, I made that purpose so far subject to the other, that I did not act precipitately, but tried different plans of cure, watching symptoms and the results.

I was always careful in respect to combs and honey affected, and in other respects used the care that the average person might be expected to exercise when impressed with its importance, without observing the extraordinary precautions in every particular, which are usually insisted upon.

The first colony that excited my attention—which was in June, 1886—had here and there dead brood in the imago stage, and little, if any, that answered to the usual descriptions of the disease. As the dead brood was in the heart of the brood-nest, and could not have been the result of chilling, I was somewhat alarmed, but after watching it awhile, the colony cast a swarm, and having noticed no radical change, and as the brood of the swarm was entirely healthy. in the rush of the season I dismissed my fears for the time.

In August, I awoke to the true state of affairs, on an examination of colonies to which honey had been fed back in order to complete a lot of partly-filled sections. Now, there was no mistaking the character of the malady. The viscid nature of the dead matter, sunken perforated cappings, the increase of the disease, and, in colonies where it had made considerable progress, a faint odor like that of a poor quality of warm glue, were all there. If half that had been told of its malignity were true, there was reason enough for alarm, and most of my colonies should have been affected, for the conditions for its dissemination could scarcely have been more favorable.

From a heavy yield from basswood, the brood-chambers had become overloaded with honey, and two or three combs from nearly every colony had been extracted, and freshly-extracted combs had been carried along and exchanged for the ones removed. Moreover, robbers were plentiful, and the young man who did most of this work, was persistent in facing, but not very skillful in circumventing them.

How to meet and overcome the great plague, was now the uppermost question. About that time there had been considerable discussion of the malady, and of different methods of cure, including the contributions of Messrs. Jones, Muth and Cheshire, of which I had the advantage. The "starvation cure," as being the most convenient, was first tried largely, and as the season was such that feeding became necessary, Muth's "salicylic acid formula" was used in medicating the honey fed.

About 40 colonies were operated on that season, the bees being confined according to Jones' directions, with every precaution, till signs of starvation ensued, when they were put into clean hives—a part on foundation, and a part on clean, empty combs. All the contaminated hives, combs and honey, were boiled, and the honey, after medication, was fed to the bees under treatment, their hives marked and carefully watched for results. These were anything but satisfactory. In a considerable percentage of the cases, the disease soon reappeared, and, in others, after a time.

Thus the first campaign closed with meagre results, so far as making practical headway against the enemy was concerned. In casting about for a new plan of procedure, I remembered that the swarm from a diseased colony became freed of the disease, by simply being left to itself after hiving on foundation; and while I did not propose, and did not give experiments with other methods, I kept my eye on this, as possibly the "pole star" that might guide to an easy escape.

The next season, in addition to the methods before used, spraying, both with salicylic acid and with a phenol preparation, was tried, but I was not long in deciding that it was entirely impractical for Americans, who must have expeditious and simple methods, and quick and certain results.

As soon as the proper season arrived, I tried the new method of simply putting the bees into a clean hive furnished with foundation, and anxiously watched the issue. It was successful. Of the numerous colonies so treated, whether the swarms were natural or made by dividing, I do not remember that one retained the disease. Here, then, was a method than which none could be simpler or more effectual.

To fix upon a systematic plan for the practice of this method, best adapted to serve the interests of the apiarist in the matter of making the most of the bees in securing the honey crop, was the next step. Regarding the time for the operation, it must be during a honey-flow, not necessarily great, but of sufficient reliability to insure against any necessity of feeding.

I found, in my experiments, that feeding a few pounds of honey medicated with salicylic acid in the spring—the food being placed in an upper story, in a capacious feeder—the disease though never cured was completely checked, and the usefulness of the colony for the production of honey preserved. One colony so fed, yielded, notwithstanding the foul brood, twice the average of the apiary.

Another benefit of this feeding is, that it practically prevents, I think, the dissemination of the disease from each colony. Taking advantage of this discovery, after much consideration I decided upon the following plan of operation, as the best under all circumstances :

In the spring, about the middle of May, feed each colony to be treated as above indicated, then treat it as healthy colonies are, until such time as the brood to be reared from eggs just laid will be of little use in the collection of the main honey crop—say 30 days before the probable close of the flow from basswood ; then cage the queen in the hive for three weeks, and at the end of that time, move back the hive, and place a clean hive furnished with foundation on the old stand, and run all the bees and the released queen into it, remove the old combs and hive to a safe place, and the work is done. Of course, colonies may be treated in the same manner during any other sufficient honey-flow.

This will serve to disclose the general principles, but to every ingenious apiarist who has several colonies to be treated, modifications of the plan will be suggested, which may be advantageously adopted under certain circumstances.

After the close of the honey season, all curative operations must be suspended, and any remaining diseased colonies are to be marked for treatment the ensuing season. It is to be observed, however, that all colonies so badly affected as to be materially weakened in numbers, should not be expected to winter successfully, and should either be united or destroyed.

CHARACTER AND INDICATION OF FOUL BROOD.

Now, at the risk of wearying, let me say a few additional words as to the character of the disease and the indications by which it may be best discovered ; and let it be understood that I state only conclusions from my own experience and observation of the disease, as it has appeared in my own apiary. Of course it is only an unmitigated evil, but if you should discover it among your bees, do not allow yourself to become disconcerted. It is not so black as painted. It takes time for it to destroy a colony, and I doubt if it would ever destroy a considerable apiary in the absence of gross neglect in guarding against its dissemination. I have had probably 100 colonies affected, almost all of them becoming so through what was, under the circumstances, gross neglect, but I never saw any indications that a healthy colony standing next to a diseased one, was any more likely to contract the disease than if it were standing rods away.

What is to be specially guarded against, is allowing healthy colonies to have combs or honey from those that are diseased. If one allow a colony to struggle with the disease till it becomes weak, or is dead, robbing will probably follow, and the contamination be carried to healthy hives ; but if one is acquainted with the early symptoms, all that is easily avoidable.

The difficulty heretofore has been that the descriptions of it, which have been made most prominent, are of it as it appears in badly diseased colonies. If one waits until he can smell it in the apiary outside of the hives, there will then be abundant cause for alarm. Like some diseases which at times afflict mankind, it seems to arise, become malignant for a time, then lose its vigor, and at last die out. The character of the first indications seems to depend upon the stage of the disease in this respect, as well as upon the extent of the inoculation.

During the less malignant stages, and perhaps on slight inoculation at any stage, the first brood diseased reaches the imago state, and does not decompose, and the first that softens entirely does not have the homogeneous viscid character that brood affected later acquires. Then appears the somewhat sunken, slightly-darkened cappings over the brownish viscid mass within, which dries and flattens down a thick scale on the lower side of the cell. Then after the diseased cells become plentiful, on holding the comb close to the nose, a slight but disagreeable odor, like that of warm glue of a poor quality, is perceived.

Generally, but not always, some of the cappings of diseased cells are perforated. If a colony contract the disease from the plentiful feeding of honey containing foul brood germs, most of the diseased brood may not be capped at all. In a diseased colony that has passed the winter, the malady does not generally reappear in the spring for a month or more, after brood-rearing begins, but is sure to appear at last, and, as a rule, progresses more rapidly than during the previous season.

Thus much for the indications within the hive ; but the careful apiarist will be attentive to the external indications also. Without other signs, if foul brood is abroad, a lack of activity and general prosperity in a colony should prompt to closer scrutiny, and if this cue is acted upon, and care exercised, generally the disease need not be attended by very disastrous results.

I have already stated that often the brood first attacked reaches the imago state, and becomes so mature as to preserve its shape and consistency. I think that there can be no mistake about this, for in several instances I have correctly prognosticated the disease when no other phase of it was present. The other phases followed in time. These are carried out in front of the hive. Mature bees also die of the plague, and are carried out, so that often, at certain stages, there is an undue accumulation of the dead in front of the hives of diseased colonies. Often, too, mature bees, weakened and unable to fly, are yet able to desert their hives in considerable numbers, and may be seen hopping away upon the ground.

If all of the foregoing indications are looked for, and prompt action taken where any of them appears, one may feel reasonably safe without a frequent general examination of the brood-chambers of the apiary, expressly to search for signs of the disease.

In conclusion, whether the disease will die out of itself, I do not certainly know, but I know that it seems to lose its vigor. I have treated none the past season, but have three affected colonies on hand, which I am keeping for study. Two of them certainly, and all, probably, have had the disease for more than a year. In two of them the disease has made no apparent progress the past year ; in the other, the prosperity of the colony has been somewhat affected.

Lapeer, Mich.

WINTERING.

How to Prepare Bees to Winter Successfully.

Written for the American Bee Journal

BY J. A. PEARCE.

How shall we winter our bees ? This question perhaps more than any other just now, is being asked by bee-keepers generally. It is the leading, unsolved problem of the apiary. If honey is to become a staple article of food, like pork, patent flour, or beet-sugar, and not the fitful thing it now is, we must have better wintering of bees, and hold our honey in good, straight combs and pails, and not try to throw it all on the market at once.

How can better wintering of bees be attained ? It occurs to me something like this : If bee-keepers would cease for a time sending in their almost useless, big, honey reports, and in lieu of them, send a simple, plain statement of just how and where they winter their bees, it would go very far towards settling this question. By loading that great "gun"—the AMERICAN BEE JOURNAL—and firing a few rounds at this Monster, he would be either dead, or so badly crippled, that he would limp off to die in the near future. With this end in view, I will report how I have wintered my bees for the last four years, without loss.

I have an ordinary house-cellar, 18x24 feet, without any ventilating-pipes running to it. My bees are in the 8-frame Langstroth hives—94 colonies in the cellar at this writing, all bright, clean and quiet. They were put in on Nov. 12.

A few days before putting them in, I remove the enameled cloths, and substituted a quilt made of two-thirds of a pound of batting, held in burlap. I then prepare the cellar by putting three empty hives along one side; on these I lay two 2x4-inch scantling. Now I am ready to put in the bees. I take a lot of pieces of lath, one for each hive, 14 inches long, to close the hive-entrances. I drive a carpet-tack through each end—they just reach through so that the points enter the wood, and prevent the force of bees from pushing them off.

Then I have carrying-racks made of 6-inch boards, 6 feet long, with pieces nailed across to put the hives on. I place two hives on, and two men carry them to the cellar top, and from there they put them down in with their arms.

When the first row of scantlings are full, I lay two more on top of these, as near the ends as possible, and place another row of hives on these, and so on, having nothing on the hives but the quilts.

Now I put down three more hives far enough from the other row to admit of walking between, and tier up the hives as before, and so on until the cellar is full, or the bees are all in. Putting the hives right over each other, gives a circulation of air up between them.

When the bees are all in, I darken the cellar, and when the bees quiet down a little, I remove the laths from the entrances as quietly as possible. I want to say right here, that the bees should not be disturbed any more than possible. You will observe that the sound of a hammer has not been heard, as was said of the "building of Solomon's Temple." I do not allow the hives or supports to touch the sides or top of the cellar, so as to receive any jar from above.

I now bring the temperature as nearly 42° as I can, as I find that the bees come nearer hibernating at this point, than at any other. They become so quiet that if a stranger would go into the cellar without a light, he would stumble upon them, for want of any warning sound.

When Rev. W. F. Clarke advanced his "hibernation theory," he sounded the key-note to successful wintering; for, rest assured, that if the bees are making a noise, there is something wrong, and you had better find out what it is, and correct it, or there will be a lot of empty hives in the spring.

I do not think that my bees consumed 4 pounds of honey per colony last winter. They were so full of bees in the spring (April 8), that a good many colonies hung out the first day they were put out of the cellar.

The first year I kept bees, I left the enameled cloth on, and all the bees on the summer stands died. There was a half inch of ice in the hives, all around. The moisture from the bees had rushed to the cold surfaces and then condensed there. I then saw that it was moisture in the hives that killed the bees. This I have since prevented, by using quilts to keep the cluster warm, but at the same time let the moisture pass off and condense on the cold cellar-walls, instead of on the inside of the hive. Since I have practiced this, I have had no loss, notwithstanding one year they had very poor stores—mostly honey-dew and oak-juice.

Grand Rapids, Mich.

THE UNION.

Importance of Joining the Bee-Keepers' Union.

Written for the American Bee Journal

BY HENRY K. STALEY.

In looking over the list of members enrolled under the "National Bee-Keepers' Union," I was somewhat astonished at the fact that it has only a few hundred out of the 300,000 bee-keepers of America; and that many of the names of our leading apiarists, who make their bread and butter from this pursuit (as well as some of the leading editors of our bee-papers), should have their names absented from its list.

In view of these things, I ask, What can members of the Union expect from minor apiarists, who may have only a few colonies, which they work with *ad arbitrium*, during hours of recreation from their studies or pursuits, and to produce enough honey for their own use? These people do not depend upon a livelihood from the bee, and therefore should be less expected to join the Union, than those who make their living from bee-keeping, and who cannot afford to be assailed by ignorance, prejudice, and the whims of reporters.

Yet I am persuaded, that if the leading apiarists of our land would show a greater interest in this object, the minor apiarists would then bring up the rear with their dues. A good many of them have seen the wonderful monument of adamant truth and prosperity raised by this small handful of bee-keepers, on the lands of Arkadelphia. They have seen how the high-handed Council of the city of Arkadelphia, had to sneak off like "whipped spaniels," and in the sweat of their faces, eat their own bread of bitterness, when the unprejudiced and unalloyed light of the Supreme Court of Arkansas was thrown upon them.

Here we have a precedent, obtained by some 300 bee-keepers, which will stand as a guide for judges to be governed by, in such and analogous cases, as well as for the enlightment of City Councils, and as a cover for biased and prejudiced men against an honest pursuit. The immensity of this decision can hardly be comprehended by one not familiar with our laws, and the highest law of the land—the Constitution of the United States.

I think that every apiarist whose name was on the roster of the Union, when this case was won, may feel justly proud, in that they, each and every one, helped, by their means, to contribute toward its success. Indirectly, they helped to show that bees are no more a nuisance *per se*, than that a mule may put into operation his natural propensity of recalcitrating when irritated; and that bee-keepers have rights which cannot be trampled on by biased City Councils.

Now, to keep up the good work that the Union has done, and is still doing, more bee-keepers must become members; and the way to do that, is to arouse all the energy, and create an incentive at the top of the bee-keeping world. Every editor of every bee-paper, who is not a member, should become one at once, thereby setting the example; and then create an unstopable stampede, by writing an article *sine die*, and by means of the same, inform his subscribers what the Union is, what it contemplates doing, and what good it has rendered for every bee-keeper in the land. Let them known how Mr. Clark was thrown into prison, and maltreated, and commanded not to keep his bees within the city limits. Let them know of the magnificent argument of the Hon. S. W. Williams, attorney for the Union, and of the *skunky* argument of Messrs. Crawford & Crawford, for the city of Arkadelphia!

I think that by so portraying this case to the bee-keepers of the land, they will recognize its worth to them, and willingly join hands with us, that we may battle with the other lawsuit cases, and render other prejudiced men *hor de combat*. Brother bee-keepers, you have seen what the Union *has* done—now is the time for each and every one of you to come forward and lock hands with us. "Delays breed dangers. There is nothing so perilous as procrastination."

Cincinnati, Ohio.

MARKETING.

Selling the Honey Crop in the Home Market.

Written for the American Bee Journal

BY WILLIAM CROULEY.

My report my 1889 is as follows: I began with 80 colonies, spring count, in fair condition, increased to 120 colonies, and took 2,000 pounds of comb honey in sections, and 1,500 pounds of extracted honey, being the poorest of the last three seasons. It was the "off year" for basswood to bloom freely, and the bees were not in readiness when it did bloom, to do good work; and it was so dry in the fall, that the fall honey crop was almost a complete failure.

I have sold the honey at my home market—comb honey at 20 cents per pound, and extracted at 12½ to 15 cents per pound, right in the face of some of my brother aparists, who have tried to force honey on my market at about half that price.

DISPOSING OF THE HONEY CROP.

I will give an idea of how I manage my home market, hoping that it will benefit some of the fraternity, who, I imagine, are a little deficient in this most important feature of our business.

I furnish each grocery in the town with an attractive show-case, and he gives it a prominent place on his counter. These cases open from behind the counter, to prevent customers from handling the honey. The cases I keep well filled with both comb and extracted honey on sale. I do not ask them to buy the honey, but open an account with each merchant, and receive credit for the honey when delivered to them, at the retail price, which price I make the same to all of them.

I do not care how much honey they sell, but they sell all that I can use in trade in my family, which is quite an item in the course of the year.

Now as to the cash part of my business: I have the good-will of the merchants, and they have stood by me, for they have not shipped in a pound of honey in the last two years, although it has been repeatedly offered to them at ruinous prices.

In the winter, I make boxes for retailing comb honey; they are made to hold a half dozen one-pound boxes. I make them of a good quality of shingles; 1,000 will make about 160 boxes. The ends are made of $\frac{7}{8}$-inch lumber, to nail to. By nailing the shingles one thick end and one thin end, on the opposite sides, it makes a square box. The material costs about 2 cents per box. It makes a neat package for the purpose.

As soon as the first honey is ready for market, I take my sample case (which holds two sections, and is nicely made and painted), and go on a little excursion through the towns and country, and of course I show what I have in that "funny little case." I am pretty certain to get an order at nearly every house for at least one box of a half dozen sections, which I sell for only $1.00. My sections are filled so that a half dozen weigh about 5 pounds. I sell them for 20 cents each, in less than a half-dozen lot, so that I seldom fail to sell one box, if they will buy any at all. The majority of my customers have used, so far this season, from 3 to 8 boxes, and I find it the hardest to sell them the first box; they often hail me on the street with, "Got any more of that fine honey? It is going fast. Send two or three boxes to my house, just like the last one we had."

My extracted honey I put up in tumblers—pints and quarts—and two-quart fruit-jars. It often seems to me, when I see bee-men scouring the country several hundred miles from home, offering honey far below the market price, that there must be something wrong. The further I go from home, the harder I find it to sell my honey; consumers like to know where the honey comes from, for the "Wiley lies" are not yet all dead.

UNFINISHED SECTIONS—BEE-ESCAPES.

I find it a tedious job to extract the honey from unfinished sections. Last fall I uncapped them, and filled a super half full, and as far apart as I could get them. I then put the super on the hive of a colony that needed feeding; in 24 hours every drop of honey was taken out, and carried to the brood-chamber. Give it a trial next fall.

I feel very thankful to those who so kindly have donated to the fraternity, the bee-escapes mentioned in recent numbers of the AMERICAN BEE JOURNAL. I trust that they all will prove successful in getting bees out of the sections.

Redwood Falls, Minn.

BEES ON THE FARM.

How to Manage Bee-Keeping with Farming.

Written for the American Bee Journal

BY FRANK COVERDALE.

Bee-keeping amongst farmers is quite often looked upon as a matter of aggravation, or little profit, all things considered; for there are many of this class who even go to the bother and expense to furnish their bees with movable-frame hives, and then hive them upon the same, not even looking to see if they build straight combs, or furnish them with a particle of foundation; then the hive may be unnoticed for three weeks or more, when the operator will raise the honey-board to see if they are ready for sections, but, too late, the honey harvest is over—the sections are put on, but there is no honey, and no profit.

The farmer is called from the field, by his wife ringing the bell; he hitches his horses to the fence, and runs to save the swarming bees, thus leaving the hay-field, road-work, or whatever it may be; so he neither farms nor keeps bees successfully.

With the foregoing state of affairs, it would be better not to have a colony of bees on the place, for such a farmer could buy his honey cheaper.

As I farm 247 acres of land, and make a success of both farming and bee-keeping, I will tell how I do it. In the first place, I do not work my land until it grows but one-half of a crop of grain or corn; but I choose a plan different from this, and keep it quite reasonably well in grass, and grow about 50 acres of corn; so it will be seen that by this treatment, the ground is rich, hence a heavy yield of corn, good pasture, plenty of hay and young stock upon the place.

I am not compelled to go to the field every day, but can have considerable time to look after my bees. I go out and help to plow the corn the first time through, and if honey is not coming in, I keep on plowing; thus the corn is not neglected. When the corn-field is clean, and honey is commencing to come in, my man goes right ahead with the corn-field.

When the bees are well supplied with cases, and well at work, I mow down the grass for hay; but before starting, I bring some nice, light 8-frame Langstroth hives from the store-house, and place them within reach; and as the bees are close to the back door, my wife will be sure to hear or see them if they swarm. With queen-cage and veil she starts for the bee-yard, cages the queen (all have clipped wings), puts down the smoker, and soon returns with cover and top-board in one hand, and the body of the hive on the same arm, and the botton-board in the other. Any woman with ordinary strength can do this with ease. For $5.00, a girl can be had for these two weeks in haying, and my wife likes no better fun than to cage queens, and place the hives close by the old one, throwing a canvas of some kind over the old hives. The rest is left for me, when I come from the field.

During the two weeks of making hay, many of the section-cases will be ready to take off. I can well afford to take a half day to put the bee-escape boards under the section-cases, and put other empty cases underneath. In two or three days I carry my bee-deserted cases to the honey-house; here will be a half day more lost (?). Thus the white clover honey-harvest, with haying, will be almost at a close, and I will have plenty of time to attend to the other cases left on. The bees will not bother much in oat harvest, as a general rule.

The grain is stacked without interference; this, perhaps, will be about the middle of August. One week after this date, heart's-ease begins to bloom here, and, as a rule, yields surplus; it often exceeds that of clover. At this time of year, the farmer will find plenty of time to attend to the honey crop, and prepare the bees for winter's quiet.

We will say that 50 pounds of comb honey will be about the average per colony, over the United States; thus 50 colonies would annually produce 2,500 pounds, which at 12 cents per pound, would amount to $300. Twenty-six hogs, weighing 350 pounds each, will bring, at present prices, $296.75. I want to say right here, that no one thing upon the farm, pays me so well, in dollars and cents, as do the bees; and with no other great industry, does apiculture combine better.

Welton, Iowa.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.50**, if the order is received at this office before January 31, 1890.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Jan. 21-24.—Minnesota State, at Excelsior, Minn.
Wm. Urie, Sec., Minneapolis, Minn.

Jan. 22.—Vermont State, at Burlington, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Jan. 28.—Cortland Union, at Cortland, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.

Feb. 5.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 5-7.—New York State, at Rochester, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

Feb. 19-20.—Ohio State, at Cleveland, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 19-20.—N. E. Ohio, N. W. Pa., and Western New York, at Cleveland, Ohio.
Geo. Spitler, Sec., Mosiertown, Pa.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Gathering Pollen and Honey.

Pollen and honey are coming in. I have 41 colonies of bees, which are on the summer stands, and to-day they are working very strong, and carrying in lots of pollen and some honey, which they are gathering from the soft maple. They have worked some every day for the last ten days, except on two or three days. Prospects are splendid for a crop of white clover next spring. J. H. COMPTON.

Cowling, Ills., Jan. 10, 1890.

A Good Yield of Honey.

I commenced the season of 1889 with 30 colonies, increased them to 75, and took 5,850 pounds of comb honey in one-pound sections. I have united and sold my bees down to 60 colonies, 50 of which are packed in chaff hives, but packed overhead. They are wintering finely so far on the summer stands. I have out on commission, and sold, all but 700 pounds of my honey. It seems to be selling slowly. The clover seems to be in good condition so far. It is cooler this morning, and it looks as if the nice weather we have been having, is disappearing fast. JOHN BLODGET.

Empire, Mo., Jan. 6, 1890.

Self-Hiving Arrangement, etc.

On page 27 is an article from Henry Alley, concerning the self-hiving of bees, by means of what he calls a novel device—attaching two hives, an empty one, and one with a colony in it, side by side, so that when a swarm issues, the queen finding that she cannot pass directly out to join the bees, runs along the device, and passes into the new abode, and is there joined by the bees. Mr. Alley says that the inventor of the apparatus thinks his discovery worth the moderate sum of $1,000. I have not as yet looked up the article in the BEE JOURNAL, that he refers to; but I have had hanging in my bee-shed between four and five years, this grand discovery of a self-hiver, made without having heard of, or seen, anything of the kind. Several of my bee-keeping friends belonging to the Philadelphia Bee-Keepers' Association, saw it on the hives, and it was referred to at one of their meetings; whether somebody got the idea from that, I do not know, but I do know that I never have seen or heard of anything of the kind until I saw Mr. Alley's article.

I made a self-hiver out of ½-inch lumber, making a box 20 inches long, and 3 inches deep on the ends and one side, and the other side 4 inches deep, that it might serve for an alighting-board. In the bottom I made two openings, one for the entrance of each hive; on the front, I nailed a piece of perforated zinc 20 inches long and 4 inches wide. I only tried it once, and not having secured it in its place, the queen found a little side-door arrangement by which she joined her subjects; but of course the device must answer the purpose, if properly secured. The cost of the device is comparatively nothing. The honey crop was a failure the past year. I extracted a few frames with my home-made extractor very nicely.

Philadelphia, Pa. L. STOUT.

Pollen from Dandelions, etc.

Western comb honey is retailing at 12½ cents per pound in one-pound sections here. Bees were gathering pollen from dandelions on Dec. 28, 1889; and on Jan. 12, 1890, bees were bringing in pollen from dandelions and swamp-cabbage, like in early spring. The temperature was over 80 degrees in my apiary.

H. P. FAUCETT.

Dilworthtown, Pa., Jan. 14, 1890.

Bees Breeding Rapidly.

Last month was more like April than December. Vegetation was in bloom in southern exposures, and green strawberries are on the vines. Bees have been bringing in pollen up to this time, as in the fall, and storing some honey from maples and other sources. At one time there was an abundance of honey-dew in some locations. Bees are breeding rapidly, and are in good condition. C. WEEKS.

Clifton, Tenn., Jan. 7, 1890.

Making Bee-Escapes, etc.

I have read Dr. Tinker's way of making the Dibbern bee-escape. My way is so simple, and I am fearful that it will not work. I take a board as long and wide as the hive; this board is made with a half bee-space on both sides, as my hives and supers have half bee-spaces. On this board I nail three strips, 3-16 of an inch thick, and 10 inch long, nailed so as to be V-shaped. On the strips I tack wire-cloth cut to fit. I leave a space at each corner, so that one bee can pass at a time.

The weather here is all that can be desired for wintering bees out-of-doors. There is no sleighing as yet, but plenty of rain and mud. E. M. SLOCUM.

Easton, N. Y., Jan. 4, 1890.

White Aster and Golden-Rod.

I have been very deeply interested in the BEE JOURNAL for the last five or six months, and particularly in the discussion of the merits of the so-called national flower (the golden-rod). Now let me say in all candor and honesty—I do not believe that there was ever one ounce of honey gathered from *golden-rod*. Why? In the first place, we never see golden-rod growing without wild aster growing in its immediate neighborhood; second, the wild aster of Southern Illinois has a yellow center, which secretes honey, or nectar, and our bees gather that, and we call it "golden-rod honey." I have been watching for bees on goldon-rod, and had my neighbors to do the same, and we have yet to find the first one to report that he has ever seen a single bee working on golden-rod. There is no fall flower that grows which receives as much attention from the bees as our white aster (commonly termed "bee-weed" in this county).

Give us the wild asters for our national flower, and we will have a flower of no mooted question as to its nectar-producing qualities! I am, as yet, an amateur in bee-culture, but I think from my own observation (and that of many bee-keepers of Southern Illinois), that if the life of the honey-bee depended upon golden-rod, there would not be a live bee in Illinois to-day. I have bees that came from the best breeders in the United States (and I think that there are no better in the world); I am proud of them, and am thankful that there is plenty of flowers that produce nectar to feed them, and which yield a surplus to spare—but I am for a known honey-producing flower as our national flower, and I object to so much praise of a flower that is neither useful nor ornamental, viz: Golden-rod. IRA REEVES.

Carmi, Ills., Jan. 3, 1890.

Sections Filled Flush to the Edge

I use wooden frames on the three sides of my tin and zinc perforated separators, made of strips of wood ⅞x5-16 of an inch, grooved ⅛ of an inch to take the separators, and mitred at the top, leaving the bottom open for the bees. Dip the joints into melted wax to hold them in place, and you will ensure the sections being built flush to the edges. My bees are on the summer stands, with very little snow on the ground, and the temperature at 40 degrees above zero. The golden-rod produced largely and of good quality, increasing our fall crop of honey. I think that alfalfa is useless for bees or anything else. B. LOSEE.

Cobourg, Ont., Jan. 13, 1890.

A Swarm-Hiver and Its Use.

I made and used the swarm-hiver last season, and gave others the privilege to make and use it, supposing that I was the only one that ever thought of the like. On May 20, 1889, I attached the swarm-hiver to my only colony of bees; and on June 8, I had the pleasure of seeing a swarm of bees hive themselves. It looked nice to me, for they swarmed twice the summer previous, but went—well, I do not know where, but I know that I run myself very tired for the last swarm that left me, trying to know where they went. I used wire-cloth for the connecting-tube, with a nice strip of wood on the bottom, as a floor, for her majesty to walk on, if she chose to do so. Five strips of perforated-zinc, for a wood-zinc honey-board, will make the entrance-guards for both hives, costing 5 cents; wire-cloth costing 3 cents, will make the connecting-tube, to convey the queen and drones to the empty hive. H. T. SEWELL.

Pleasanton, O., Jan. 10, 1890.

Bees Wintering Splendidly.

Bees in this locality are wintering splendidly, the greater number being on the summer stands. There has been no cold weather this winter, to speak of—the only ice we have had was on Thanksgiving Day; since that time we have only had a few frosts. There have been warm days every week since Thanksgiving, which have been warm enough for the bees to fly. Bees are carrying in pollen and water, and the indications are that they are breeding. I think that those who are wintering their bees on the summer stands had better bear in mind that the bees may run short of honey during this warm weather. Owing to the excessive exercise that they have during this warm weather, they consume a great amount of honey.

My bees are all in the cellar; the only trouble I have had, has been to keep the temperature low enough. I have been obliged to have the doors open at night, to keep the temperature low enough. I find that my bees are perfectly quiet when the temperature is at 48 to 50 degrees; 54 degrees is too high, and 45 degrees is too low. My bees are all in loose-bottom hives, the bottom-boards being left on the summer stands. I make a rim 4 inches deep, of ⅞-inch lumber, the same size of the hive; on this I nail a sheet of burlap, then place a break-joint, slotted honey-board on each hive, with one of these rims above it; the rim is then filled with chaff, and the colony is ready to carry to the cellar.

GEO. H. KIRKPATRICK.

New Paris, O., Jan. 13, 1890.

Bees and Crops are Forward.

My bees have been gathering pollen for the past ten days. They are on the summer stands yet, with plenty of stores. Wheat is now in joint, and on looking out over the fields, it waves like it does the first of May. We are fearful of its being too forward.

R. W. TALLEY.

Hornbeak, Tenn., Jan. 13, 1890.

Bees in Fair Condition.

I started the past season with 100 colonies of bees, and at present I have 150 colonies. I took 9,000 pounds of honey, which is nearly all sold. I have not put my bees into the cellar yet, and I do not think that I shall, unless we have colder weather than we have had so far. Bees are in fair condition yet. E. F. MEEKER.

Duncan, Ills., Jan. 1, 1890.

The Weather is too Warm.

We had a very varied season for honey in 1889—some times too cold and wet, then too hot and dry, yet our average was satisfactory. We secured 42 pounds per colony, all in one-pound sections. Bees are in good condition now. They have been carrying in pollen nearly every day for the last three weeks. We have had no winter yet. It is too warm; we fear for the fruit and bees. Peach-trees and strawberries are in full bloom, and everything looks like April. T. M. EDWARDS.

Kerrville, Tenn., Jan. 3, 1890.

Well Satisfied with the Results.

I am well pleased with the AMERICAN BEE JOURNAL, and the permission it gives all enthusiastic bee-keepers to tell of their methods and prosperity in bee-culture. I commenced last spring with 8 colonies, all Italianized and in good condition, and increased them to 18, by natural swarming. My idea was to let each one swarm once, and then check them by cutting all the queen-cells out but one, after swarming. In this I was successful, although two of the young swarms swarmed once each, because I did not overhaul them and remove the queen-cells, for I did not look for any of the young ones to swarm. By not letting them swarm but once, each colony remained very strong. I obtained 1,100 pounds of comb honey in one-pound sections, and 100 pounds of comb honey in frames, holding from 6 to 8 pounds, making in all 1,200 pounds of comb honey from 8 colonies, spring count. This was gathered mostly during the summer months, as we did not get much fall honey. If any reader of the BEE JOURNAL in our State can beat this, for the season of 1889, I would like to hear from him, or her. The bees were put into winter quarters with plenty of stores of their own gathering. This, however, ought to settle the question so much asked—Does it pay to keep bees?

GEORGE FREY.

Geneseo, Ills., Jan. 6, 1890.

Dead Bees—Carrying Pollen.

I have 28 colonies, all in good condition except three, which have plenty of honey, but there are a good many dead bees. What is best to do about it? The rest are carrying in pollen rapidly. JACK SHAFER.

Deposit, Ky., Jan. 11, 1890.

Experience with Bees.

I began in the spring of 1889 with one colony in a log-gum, from which I have now, on the summer stands, well packed in fine meadow hay, 4 strong colonies in ten-frame Simplicity-Langstroth hives, which I have reduced to 6 frames in each hive, leaving a surplus of 4 frames, averaging from 4 to 5 pounds each, which I shall return to the hives in the spring. I have followed up the instructions given in the AMERICAN BEE JOURNAL to my best ability. It was a "picnic" to see the bees, after I had read the AMERICAN BEE JOURNAL, for I would go straight to them and give them the benefit of my new reading; they objected to so much of scientific cultivation, but we kept on pretty good terms. I sold 89 pounds of surplus honey taken from the first swarm that came out. I had 13 pounds of pieces of honey from the log-gum, when I transferred them to a Simplicity hive.

I. E. MYERS.

Grant, Minn., Jan. 7, 1890.

Good Yield from Alfalfa.

The BEE JOURNAL is a very welcome visitor at our house; it is the first read out of five or six papers. It has been a great help to me for the last three years, as I get the experience of men who have been in the business for thirty or forty years. We had beautiful weather all the past fall, and up to Christmas. At present the ground is frozen one inch deep, with two inches of snow on it. The mercury is 30 degrees above zero. I had 22 colonies, spring count, increased them to 45, and took 1,300 pounds of comb honey. For the honey I received $210 in cash! How does that sound for alfalfa as a honey-plant? Bees are in fine condition for winter. I winter them on the summer stands. I wish that some of the bee-fraternity would tell, through the BEE JOURNAL, how they return swarms to the old hive, when the queen's wings are not clipped. F. H. MCDONALD.

Star, Idaho, Jan. 1, 1890.

Report for the Past Season.

I began the spring of 1889 with 20 colonies, increased them to 45 colonies, and then in the fall I reduced them back to 38. I put 36 of them into the cellar, and have 2 colonies in the bee-shed. If I have 35 colonies in the spring, I will be satisfied. I think that my cellar is too warm, as there are a great many dead bees on the ground. I put them in on Nov. 12. I will clean up the dead bees every month. It has been very warm and rainy weather here all fall and winter so far. My honey crop, I think, is medium; I have crated now on hand, 125 pounds in one-pound sections. I have 75 Langstroth brood-frames that will average 5 pounds each, making 375 pounds more; and I think that we have used at least 100 pounds in the family. I have also sold 62 pounds at 15 cents per pound—which makes a total of 662 pounds of white clover honey; and I think that I can get 15 cents per pound for the comb honey in sections by next spring, although it is retailing now for that in Pittsfield, Ills., and in Louisiana, Mo. If my bees hibernate through the winter all right, I will try an extractor next summer, and see what I can do with it.

LIONEL BROKAW.

Summer Hill, Ills., Dec. 25, 1889.

Woman's Experience with Bees.

Years ago my father gave me a swarm of bees, and said, "Do what you can with them." We had no home, but lived with Mr. K's father, and my hives were box-hives, like all the rest. I got no honey, but plenty of bees. My husband, like others, got the "Western fever," and "West" he went, to get us a home, and came home without one, as we had no money to buy such as he wanted. He talked "West" for three years, and then I got the "fever" too, and West I went, and came home with the "fever" all gone. We intended to buy a farm, and had only $1,000 in cash to buy with, and wanted a good-sized one. We went in debt on a farm that had been rented for nine years—a farm of 200 acres, with no fence on it, or anything else to live like other people. I had some Langstroth hives, and my bees began to work. I told my husband that I would pay for the farm with honey! I had to work with the bees all alone, as they stung the life out of my folks. I rolled my sleeves up and went to work with a will. The first year my bees all died except 6 colonies. The next season I crowded them with boxes, had 9 new swarms, and sold $100 worth of honey; the next year only $60—I felt weak; but the next year I had $350 worth, and the next, $556 worth; and the past year I had 8,000 pounds of fine honey, and the average price per pound is 9 cents, as honey is very plentiful. I have 148 fine colonies, and can pay for another farm if I keep well. We wives can lend a helping hand in many ways if we select some business, and stick to it. We do not take many cares off our husbands, but we can try to pay for our homes. I let nature take its course with my bees. How nice it is to pay all expenses on a farm with bees, and then have all that is made on the farm, clear. I often look at my pets, and wonder how they can do so much.

MRS. H. A. KENRICK.

Mindoro, Wis., Jan. 14, 1890.

First Year's Work with Bees.

I procured my first bees last spring, commencing with 20 colonies. My new hives contain 2,140 cubic inches each, being two stories high, and all painted white. I use the Langstroth brood-frames, which are perfection, in my mind, as the combs are so beautifully built in them, straight and even. I allowed my bees to swarm naturally; they gave me 26 new swarms, and stored 1,400 pounds of comb honey in one-pound sections. My honey is all sold at from 10 to 15 cents per pound, according to the grade, except about 400 pounds that I kept in case I should have to feed some colonies in the spring, and a few pounds for my neighbors.

Owing to my inefficiency in the business, I lost 4 colonies on account of their losing their queens; this is one place where I prize the AMERICAN BEE JOURNAL, as it has taught me how to furnish my bees with eggs and queens, and had I known this last spring, it would have been a saving of over $20 to me, and now the BEE JOURNAL has told me all this for one single dollar! Just think what I will save next year, at the same rate, as I have put 42 colonies into winter quarters, and I think that they have an abundance of stores! I am wintering my bees in the cellar; it is very dry and well ventilated. I take great pride in looking after my bees, and as long as they stay with me, they shall have a good home, and be well cared for. The AMERICAN BEE JOURNAL also is a welcome guest at our house, and its value can scarcely be estimated. My advice to every bee-keeper is, to take the BEE JOURNAL for one year, and he will never have to be solicited to subscribe again—he will be only too willing to do so.

I intend to enlarge my apiary to an enormous size, provided I have success in the business. It shall have my individual attention from this henceforth, and I am now searching for knowledge.

G. N. BENHAM.

Red Wing, Minn., Jan. 10, 1890.

Bees are Quiet in the Cellar.

I wintered 22 colonies in the cellar last winter, and increased them to 54 the past season; I put them into the cellar again on Dec. 1, 1889, and they are doing finely. Though we have had very warm weather so far, the bees are very quiet. I had 600 pounds of surplus honey in one-pound sections, and the hives were still very full and heavy when put into the cellar.

B. T. PIERCE.

Grand Rapids, Mich., Jan. 14, 1890.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, *Sec. and Treas.*, Bedford, O.

☞ The Cortland Union Bee-Keepers' Association will hold their Annual Meeting at the W. C. T. U. Rooms in Cortland, N. Y., on Tuesday, Jan. 28, 1890, at 10 a.m. sharp. M. H. FAIRBANKS, *Sec.*

☞ The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890. GEO. SPITLER, *Sec.*

☞ The 21st annual meeting of the New York State Bee-Keepers' Association will be held in the Court House at Rochester, N. Y., on Feb. 5, 6, and 7 1890. Reduced rates will be given at hotels and on all principal railroads. The programme and full particulars will appear in due time. Each county association is requested to send two or more delegates. G. H. KNICKERBOCKER, *Sec.*

☞ The twenty-third annual meeting of the Minnesota State Horticultural Society, in joint session with the Minnesota Bee-Keepers' Association, will be held in the Town Hall, at Excelsior, Minn., on Tuesday, Wednesday, Thursday and Friday, Jan. 21, 22, 23, 24, 1890. The Bee-Keepers' Association will occupy a portion of Friday morning for its second annual meeting, and will discuss questions pertaining to bee-culture, as related to horticulture. For further particulars, address Wm. Urie, Secretary of the Minnesota Bee-Keepers' Association, Minneapolis, Minn.

☞ The Wisconsin State Bee-Keepers' Association, will hold its Sixth Annual Meeting in the Capitol at Madison, Wis., on Thursday, Feb. 5, 1890. A complete programme of the Convention will be duly mailed to the prominent bee-keepers of the State. A large attendance of bee keepers is anticipated, as the Farmers' meeting takes place the same week. We hope, also, to have a Honey Fair during the meeting. Premiums have been offered for the best display, and of samples of extracted and comb honey. Send to the Secretary for a premium list. Mr. A. I. Root is expected to be present at the meeting. DR. J. W. VANCE, *Sec*, Madison, Wis.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 20.—Comb honey is dull and lower, now quoted at 12@14c. Extracted, 7@8c., with few sales. Beeswax is now in good demand, at 24@25c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, Dec. 27.—White clover 1-lbs., 12@13½c.; basswood, 11@11½c.; buckwheat, 8@10c. Extracted, 6½@7½c. Beeswax, dark, 23@24c.; bright, 25@26c.
S. T. FISH & CO., 189 S. Water St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.
R. A. BURNETT, 161 S. Water St.

DENVER, Dec. 28.—Comb, 1-lb. sections, 1st grade, 13@15c.; 2nd, 12@14c. Extracted, 6@7c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Dec. 24.—Demand is light and prices lower, owing to bee-keepers offering honey at 11@12½c., delivered throughout the West. Very fancy 1-lbs., 12 in a crate, 13 cts.: good, 12½c.; dark, 10c. Two-lbs., white, 12c.; dark, 10c. Extracted, white, 7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

MILWAUKEE, Dec. 27.—Market dull; only best grades demanded. White 1-lbs., 13@14c.; 2-lbs., 11@12c.; dark 1-lbs., 12@13c.; 2-lbs, 10@12c. Extracted, white, in barrels, 7@7½c.: in ½-barrels and kegs or tin, 7½@8c.; dark, in barrels, 6@6½c.; in kegs, 6½@7c. Beeswax, 22@25c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Dec. 30.—Demand for comb honey has almost ceased, and choice lots can be picked up at almost any price. Extracted is doing fairly well. Basswood and California, 7½c.; orange-bloom, 8@8½c.; buckwheat, 6c.; Southern, 70@75c. per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

KANSAS CITY, Dec. 27.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

☞ Some have requested us to print a card on a less number than 100 Honey Almanacs, and we have concluded to accommodate them. We will furnish 25 copies with card printed on the first page, **postpaid,** for $1.10; 50 copies for $1.70; 75 copies for $2.30. See prices for more on the page 20.

The Report of the proceedings of the 20th annual session of the International American Bee-Association is now published. The price is 25 cts., postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ We have some full sets of the BEE JOURNAL for 1889, and *new* subscribers can have the full sets for 1889 and 1890 for $1.80 until all are gone.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 **edition**)	2 25	2 00
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

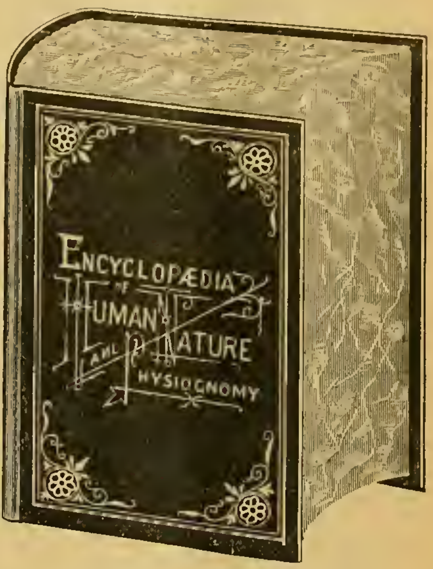
N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Our Clubing List.—We have now made arrangements with publishers of metropolitan Weekly Newspapers, by which we can club them at the very low prices quoted in the **LAST** column, without premiums. The regular price of both is given in the first column. One year's subscription for this JOURNAL must be sent with each order for another paper:

	Price of both.	*Club.*
Chicago Inter-Ocean	$2.00	$1.75
Chicago Times	2.00	1.75
Chicago Globe	2.00	1.75
Chicago News	2.00	1.75
Chicago Herald	2.00	1.75
Philadelphia Practical Farmer	2.00	1.75
New York World	2.00	1.75
Toledo Blade	2.00	1.75

$5.00 Encyclopedia.—The work is almost as large as Webster's Dictionary, 4 inches thick, weighs over 5 pounds, and occupies over 300 cubic inches of space. It is handsomely bound in English cloth, double spring back, gilt side and back stamp, marble edges, beveled boards, and contains over 100 illustrations. It is published at $5.00 per volume, which is very low in comparison with standard current prices on other works.


Encyclopædia of Human Nature and Physiognomy

It treats of every characteristic, both the good and the bad, of the various types of man and woman, and proposes to tell most people more about their fellow-men than they ever dreamed it possible to find out.

We will club it with this JOURNAL for $2.10, postpaid.

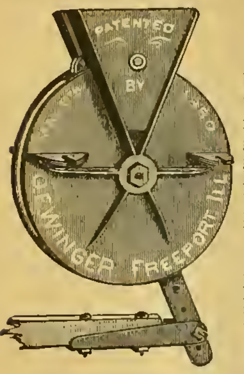
Or we will present it as a Premium for 5 new subscribers to either JOURNAL, with $5.00 to pay for the subscriptions.

This is an opportunity of a lifetime—a rare chance to get a very valuable book free. The postage alone costs 30 cents.

Postal Notes are no safer to use in letters than bank bills. Any one can get the money on them. A Money Order can be obtained at the post-office or at the express office for 5 cents (only 2 cents more than a Postal Note), and is perfectly safe; if lost it can be re-issued.

☞ We always extend the term of renewal subscriptions from the date of expiration on our books. Present subscribers whose time may expire one, two, three or six months hence, can safely renew now, without fear of loss thereby.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.



WINGER'S IMPROVED FEED GRINDER

is a novel and ingeniously arranged Grinding Mill, made to attach to 10 or 12 foot Pumping Wind-Mills, operated by an elbow attached to main pumping rod in such a manner that it can be attached or detached in a minute, so that you can either pump or grind, or do both at the same time. It works with a reciprocating lever, so arranged that it grinds on the up-motion of the Wind-Mill. The Grinder consists of a double-metal case and 3 burrs, two remaining stationary and one revolving in the center, producing a double-grinding surface, two-fold greater than any other known to the world, and will grind more than the ordinary farmer needs. It can be changed from grinding coarse to fine by simply turning one nut.

Price, **$20.** We will present one of these Feed Grinders to any one who will send us 75 subscribers to our Journals, at $1.00 each.

Advertisements.

WANTED!

To buy a Second-hand Barnes Buzz-Saw (combined machine) with Foot and Hand Power, in good order. State price and the Attachments, if any. Address,
4A1t F. W. OVERBECK, Edwardsville, Ills.

Mention the American Bee Journal.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook, Montgomery Co., N. Y.

1Atf

HOME EMPLOYMENT. AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper. *Big Cash Premiums.* Sample FREE.
THOS. G. NEWMAN & SON,
923 & 925 West Madison-Street, - CHICAGO, ILLS.

BEE-HIVES, SECTIONS, ETC.

WE make the best Bee-Hives, Shipping-Crates, Sections, &c., in the world, and sell them the cheapest. We are offering our choicest white 1-piece 4¼x4¼ Sections, in lots of 500, at $3.50 per 1,000. ☞ Parties wanting more, should write for special prices. No. 2 Sections at $2.00 per M. Catalogues free, but sent only when ordered. Address,

G. B. LEWIS & CO.,
WATERTOWN, WIS.

JUST PUBLISHED

"PRACTICAL TURKEY RAISING"

By Fanny Field. This book tells all about turkey raising, from the setting of the eggs to the maturity of the young turks. If you follow the directions in this book you need not lose a bird. Fanny Field has had more experience and succeeds better in raising turkeys than any other person in America. She clears hundreds of dollars yearly on them, and will tell you how she does it. Price, 25 cents. Stamps taken. Address

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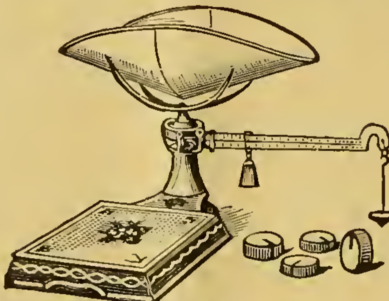
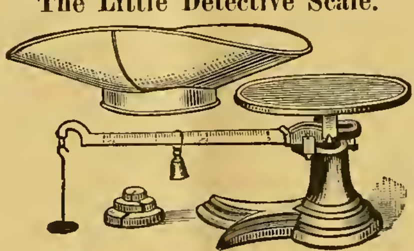
Useful Scales

The Union or Family Scale.



This Scale has steel bearings, and it weighs from ½-ounce to 240 pounds. Price, with a Single Brass Beam, as shown in the illustration, $3.00. With Double Beam for taking the tare, $3.50.

The Little Detective Scale.



This little Scale is made with steel bearings, and a brass Beam, and will weigh accurately ¼-ounce to 25 pounds. It supplies the great demand for a Housekeeper's Scale. Prices:

Single beam,	no scoop	....	$2.00.
" "	tin "	....	2.50.
Double "	no scoop	....	3.00.
" "	tin "	....	3.50.

☞ All orders filled promptly.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILLS.

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers

Mention the American Bee Journal.

SCIENTIFIC QUEEN-REARING

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature' Ways; by

G. M. DOOLITTLE,

Borodino, N. Y.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.75; or the two Journals and the Book for $2.50.

THOS. G. NEWMAN & SON,
923 & 925 W. Madison-St., ... CHICAGO, ILLS.

Illustrated HOME JOURNAL

An Elegant Monthly for the

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PUBLISHERS
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It is a moral and intellectual educator, and is invaluable in every library, as well as a very attractive and inspiring ornament in every drawing-room. Each issue contains 36 pages.

Its historical and biographical sketches, as well as its stories, are charming; its departments for the Young Folks, the Household, and the Family Circle are very interesting, and all who examine it are sure to become regular subscribers. It captivates them all.

A Sample Copy will be sent free, upon application to the publishers.

The ILLUSTRATED HOME JOURNAL will be clubbed with the American Bee Journal and both mailed to any address in the United States and Canada, for one year, for **$1.50.**

GET ACQUAINTED WITH THE BEE-KEEPERS' REVIEW.

The December issue has 24 pages, a cut showing "The Home of the REVIEW," also an accompanying article descriptive of "The REVIEW, its Home, its Editor and his Family." This number shows more clearly, perhaps, the plan upon which the REVIEW is conducted, than does any single number that has preceded it. In its advertising columns will be found the description of a plan whereby all who wish, may secure the back numbers at a trifling cost. The special topic of this issue is, "What Will Best Combine with Bee-Keeping; and What Shall Bee-Keepers do Winters?" This number will be gladly sent free to all who apply, and with it will be sent two other numbers.
4Etf W. Z. HUTCHINSON, FLINT, MICH.

Mention the American Bee Journal.

Clover Seeds!

We can promptly furnish any quantity of White, Alsike, or Sweet Clover Seed at the following prices, which include sacks and cartage:

WHITE CLOVER.

Per bushel (60 lbs.)	$15 00
Per peck (15 lbs.)	2 75
Per pound	30

ALSIKE CLOVER.

Per bushel (60 lbs.)	$8 00
Per peck (15 lbs.)	2 25
Per pound	25

SWEET CLOVER.

Per bushel (60 lbs.)	$6 00
Per peck (15 lbs.)	1 75
Per pound	20

When ordered by mail add 10 cts. per pound for postage.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Feb. 1, 1890. No. 5.

EDITORIAL BUZZINGS.

"Good-nature, like the little bee,
  Honey gathers from hour to hour;
Ill-nature, like the spider, sucks
  Poison from the sweetest flower."

The Editor is again at his desk, after two weeks of *La Grippe* and its complications. He is still weak, but improving slowly. If "misery loves company," it ought to be well satisfied now, for *La Grippe* has found more than an average among the editors of our acquaintance. Many of the editors of the bee-papers have also been afflicted with it, with more or less severity; and, in consequence, one of the monthlies for December reached our desk on Jan. 25. Hundreds of letters from our subscribers also report that they have encountered the Russian scourge, and some are reported as having died from its complications.

☞ The best combined shipping and introducing Queen-Cage we have seen, is one sent us by S. W. Morrison, M. D., of Oxford, Pa. While the Queen is confined to the cage the workers can go in and out freely—a piece of queen-excluding zinc being placed over a small auger-hole, which also has a piece of tin to slide over it, which shuts it entirely, when desired. It is also supplied with candy for food.

☞ We have been specially invited to attend the Wisconsin State Convention at Madison next Wednesday, but we dare not accept it—our strength is so slow in returning. We hope that all will attend who can. The meeting will be very interesting, for our friends A. I. Root and Dr. C. C. Miller will be there.

The New York State Bee-Keepers' Association will hold its 21st annual Convention in the County Court House, at Rochester, N. Y., on Feb. 5, 6 and 7, 1890. The first session will convene at 2 p.m., on Feb. 5.

Among the essays and subjects to be discussed, found in the interesting Programme, are the following:

"New methods of Queen-Rearing," by G. M. Doolittle; "Best method of working to secure reduced freight rates on honey;" "Has it paid honey-producers to buy Italian and other imported queens?" by Ira Barber; "The new races of bees," by G. H. Knickerbocker; "How to run several out-apiaries for comb honey, in connection with the home apiary, for the most benefit," by A. E. Manum; "Betsinger's long-tried system of non-swarming," by N. N. Betsinger; "The fraternity, the honey-producer, queen-rearer, supply dealer and editors—their obligations, one to the other," by Ernest R. Root; "Is it advisable to introduce laying queens to a parent colony, after having cast a swarm, or being divided artificially?" "Marketing honey," by R. Bacon; "The reported short crop of honey and accompanying prices for 1889—their cause and effect;" and "Shallow *vs.* large frames in the production of comb honey," by J. H. Martin.

The head-quarters will be at Congress Hall Hotel—a first-class, $2.00 per-day house, that will take members at $1.50 per day. The Lister Hotel is a $1.50 per-day house, and will board members for $1.00 per day. The room for exhibits will be at Congress Hall Hotel. Samples of honey and apiarian supplies are solicited. All articles sent in care of the association will be properly arranged on exhibition, and disposed of, or returned to the exhibitor, as requested.

Remember that you must have a Trunk Line Certificate when purchasing your ticket for Rochester. If your station is a small one, and they are not kept in stock, get a ticket to the nearest coupon station, and then procure a through ticket (and certificate). Reduced rates will be given on nearly all the railroads, at one and one-third fare for the round trip.

For further particulars, including a complete Programme, send to the Secretary, Geo. H. Knickerbocker (Box 41), Pine Plains, Dutchess Co., N. Y.

The Golden Bee-Hive.—Mr. S. L. Klutts, of Clear Creek, N. C., has written to Prof. A. J. Cook, stating that the Professor's name is being used to recommend the "Golden Bee-Hive," by unprincipled parties. The Professor desires to make the following announcement in regard to the matter:

> At the request of bee-keepers of North Carolina, I wish to state that I have never used the "Golden Bee-Hive," nor have I ever said or written anything in its favor. Any statement to the contrary, is absolutely false. A. J. Cook.

Painting the Hives.—There is much economy in painting bee-hives, besides the more beautiful appearance they present when tastefully arranged upon a well-kept lawn. The importance of having the hives painted is explained in the following from an exchange:

> In painting hives, dark colors should be avoided as much as possible, for in extreme hot weather the combs in such hives will melt down, while in a hive painted white, no damage will be done. Such melting down of combs often comes in times of scarcity of honey in the fields, so that robbing is started by the honey running from the hive when the inmates are in no condition to defend themselves, and from this cause and the spoiled combs, much damage is done.

Queen-Cage.—Thos. S. Wallace, of Clayton, Ills., writes thus:

> I send you a sample cage like the twelve that I mailed last June to Major Shallard, of Glen Brook, New South Wales, which, I understand, went through safely. It might be a benefit to some of the readers of the Bee Journal to describe it. The food is made of pulverized sugar and honey.

It is a strong cage, and well fitted for the long voyage; but it would be too heavy for shorter distances, and cost too much for postage.

To Wisconsin Bee-Keepers.

In the Programme sent out, a mistake has been made in naming the day of holding the Convention at Madison. It should read **WEDNESDAY**—not Thursday. The date is all right—February 5, 1890. Let all take notice, and be at the Convention on **WEDNESDAY.**

New Catalogues and Price-Lists for 1890 are received from—

John A. Salzer, La Crosse, Wis.—96 pages—Seeds of all kinds.

E. Kretchmer, Red Oak, Iowa—40 pages—Bee-Keepers' Supplies.

Geo. E. Hilton, Fremont, Mich.—12 pages—Apiarian Supplies.

John Andrews, Patten's Mills, N. Y.—4 pages—Carniolan Bees and Queens.

P. L. Viallon, Bayou Goula, La.—24 pages—Bee-Implements.

A. F. Stauffer & Co., Sterling, Ills.—20 pages—Hives and Bee-Supplies generally.

A. I. Root, Medina, O.—44 pages—Bee-Keepers' Supplies and Household Conveniences.

☞ Many matters for the Editorial Department, which have accumulated during the past fortnight, are still unable to appear in this issue. We hope soon to be able to give them consideration. Our friends will please exercise a little patience with us for a few days.

☞ We have received a registered letter from Russia, and writen in Russian. We cannot decipher even the name or address. If any of our subscribers can read the Russian language, we shall be pleased to send it to them for translation.

Benefits of Affiliation.—Mr. C. P. Dadant, Secretary of the International American Bee-Association, sends the following important suggestions for publication in all the periodicals interested in the pursuit:

> Friend Newman:—In accordance with your suggestion on page 3, the Southwestern Wisconsin Bee-Keepers' Association have affiliated themselves to the International.
>
> I wish to call the attention of the officers of all our bee-associations to the importance of this affiliation, and to the benefits to be derived by them, as well as by the International, from such a bond of union.
>
> In the first place, all delegates of an affiliated association become members of the International, without further expense, and are entitled to take part in its proceedings, and to receive a copy of its report. Each affiliated association is entited to choose one delegate for every 25 of its members, or fraction thereof, to represent it at the annual convention of the International.
>
> The President of each affiliated association becomes *ex-officio* Vice-President of the International.
>
> The Secretary of each association makes a report to the Secretary of the International, every season, of the condition of bee-culture, and of the crop in his section, with the name and the crop of each member, and this is published with the proceedings. If we can have a union of all the bee-keepers' associations effected in this manner, we shall be well prepared to make a display worthy of America, at the coming International Fair of 1892. We must show the world that bee-culture is not so small a branch of farming, after all, and that we appreciate the fact that all progress comes from the interchanging of ideas between intelligent men.
>
> Then think of what a pleasant thing it would be for a dozen presidents or more of local, State or Provincial associations meeting together at an International convention!
>
> I earnestly solicit all presidents or secretaries of local, State and Provincial associations to send to me for a copy of the proceedings of the convention held at Columbus, Ohio, which contains the regulations on the subject in question. (The price is 25 cents.) I also solicit correspondence from any and all, in regard to this. Our aim should be to show that America is ahead—far ahead of any other country, in progressive bee-culture, and this we have a good chance to show at the World's Fair of 1892, with pleasure and profit to ourselves, if we organize well for it.
>
> C. P. Dadant, Hamilton, Ills.,
> *Sec'y International American Bee-Association.*
>
> P. S.—Other bee-papers please copy, so that we may have a unanimous action. Suggestions from the publishers of the divers bee-periodicals would help very much.

This is an important matter, and should receive immediate attention at the next meeting of every local society of apiarists on the American Continent. Read the following from Mr. Holtermann, Secretary of the Ontario Bee-Keepers' Association:

> For once we have well got the start of our far-seeing, sharp United States brethren—the Ontario Bee-Keepers' Association has affiliated with the International American Bee-Association; and the affiliated association is entitled to the two "silver medals" to be offered as prizes for honey, open for competition to all its members—one medal for the best honey in the comb, and the other for the best honey out of the comb. Then the affiliated society is entitled to one representative for every 25 members that the affiliated society has. Now all the above for $5.00, and yet we are the *first* to see the advantages of such a bargain! I say this, not so much to "crow over" our well-known acuteness, but to draw attention to the advantages to be derived from affiliation, and with a sincere hope that every State bee-keepers' society will affiliate. The advantage will be very pronounced in favor of the association affiliating, yet indirectly it will be as great in favor of the International.
>
> R. F. Holtermann.

We congratulate the Ontario Bee-Keepers' Association upon its having the distinguished honor of being the first bee-society to affiliate with the International Bee-Association. Now let every bee-society in America imitate the good examples set before them by the Ontario and the Southwestern Wisconsin bee-keepers' associations. All will see the advantages to be gained by so doing.

* * *

Feeding Candy to Bees.—Some bee-keepers, whose colonies may be short of winter stores, will have to feed their bees in order to carry them safely through the winter. To supply this need, candy is used by some, and is given as described in the following paragraph, taken from one of our exchanges:

> It is generally conceded, and I know from experience, that candy for bees in the winter season is very healthy, and they do well on it. Bees will winter on properly-prepared candy, and I have never yet seen a case of diarrhea when candy was used to some extent from the beginning of the winter. I do not advocate wintering bees altogether on candy; the colony ought to have honey, and I would prefer them to have the usual amount. My idea of the matter is, to have a little candy over the cluster of bees all winter. Of course it will take several pounds, for it seems that the bees prefer it to honey, and constantly work on it.

* * *

Pure Bees.—A. Graves, of Richmond, Mich., asks the following questions:

> 1. Will you please state when and how it is best to introduce Italian queens, in order to obtain *pure bred* bees? 2. Also, which size of Bingham smokers is best for general use?

1. If a *tested* Italian queen be introduced at any reasonable time by any of the ordinary methods, *pure bees* will be the result.

2. The size of the apiary should decide the choice of a size for a Smoker. For 25 or more colonies, we prefer the large sizes.

* * *

"**Brazil** and the Braganzas," written by the Hon. George Makepeace Towle, and superbly illustrated with portraits, views and autograph *fac-similes*, leads off the February (Mid-winter) number of "Frank Leslie's Popular Monthly" with admirable timeliness. It is the first complete and illustrated magazine paper on the subject that has appeared since the revolution of Nov. 14.

QUERIES and REPLIES.

Starters of Foundation Used in Wired Frames.

Written for the American Bee Journal

Query 683.—Will bees build their comb true in wired frames, where only starters of foundation are used?—S. H.

No.—M. Mahin.

Where the hives are level, they will.—J. M. Hambaugh.

Sometimes they do; sometimes they do not.—C. C. Miller.

Yes; but it is better to use full sheets of foundation.—A. J. Cook.

Not always. Conditions have much to do with it.—H. D. Cutting.

They are not likely to. You would better use full sheets.—Mrs. L. Harrison.

No. They are no more likely to build true in wired, than any other, frames.—C. H. Dibbern.

If exactly plumb, I think they will. But why use wire at all, if only starters are put in?—Eugene Secor.

Yes, if the frames hang true, and the wire is true in the frames.—A. B. Mason.

Yes; at least they always do so with myself. I prefer full sheets of foundation, for several reasons.—J. E. Pond.

Yes. I have had them to do it often; but their propensity of building drone-comb is objectionable.—P. L. Viallon.

Yes, largely so, but not so true as where foundation is used, but the same as though no wires are used.—R. L. Taylor.

There is no need of wired frames where only starters are used. The wires will be likely to hinder the bees.—Dadant & Son.

I have never tried them, as I do not use wired frames. I know that they will build their comb true without the wires, if the colony is reasonably strong.—J. P. H. Brown.

No. If there is one folly greater than another in modern bee-keeping, it is that of wiring brood-frames!—G. L. Tinker.

Such building is not satisfactory with me. If the bees are to build their combs, leave the wires out.—G. M. Doolittle.

Yes, as a rule, but it will pay you to put in full sheets of foundation where you wire the frames. Were I using only starters, I should use a strip of foundation preferably not wider than three cells, or three-fifths of an inch, and I would not wire the frames.—James Heddon.

If the frames hang perfectly "plumb," and the wires are perfectly true and straight in the frame, and if the starter is put in perfectly straight, remarkable success may be expected. Failure in this matter should be charged to the blundering bee-keeper, and not to the bees.—J. M. Shuck.

No. They are just as apt to get out of line—and more certain to do it, where wires intervene, than where they have a clear frame. The fact is, I have never seen a really good comb that was built by the bees in a wired frame. When they are built in a frame that is not obstructed by wires, the combs can be pressed into place, if the bees have failed to keep them straight; but not so easy if the wires are out of place. I prefer combs drawn from full sheets of foundation, both for convenience and profit.—G. W. Demaree.

CORRESPONDENCE.

THIRD PRIZE.

Extracted Honey—Production and Marketing.

Written for the American Bee Journal
BY W. L. PORTER.

Extracted honey—so-called from the process by which it is taken from the comb—is the pure liquid honey without the wax.

It is taken from the comb by removing the caps from the honey-cells with a sharp knife made expressly for this purpose. Then the combs are placed in a cylinder that can be made to revolve very rapidly, and by centrifugal force the honey is thrown out, without any injury to the combs. By this means, the comb can be returned to the hive, and re-filled, thus making a wonderful saving to the bees.

By careful estimate, it is found that to make one pound of comb, it is necessary for the bees to consume twenty pounds of honey. Not only this, but it is a great saving of time, as the making of comb by the bees is not a rapid process, and very often, when the bees have a great abundance of nectar to gather, they are short of honey-cells in which to store it, and, consequently, the precious flow is lost. This great invention, of saving to the bees, gives the apiarist great advantage, and enables him to obtain double the amount of honey that he could secure by allowing the bees to build the comb. Thus it will be easily seen that the extracted honey can be sold much cheaper than that in the comb.

EXTRACTED VS. COMB HONEY.

"Extracted honey has all the flavor of comb, and is in every way equal, if not superior." For domestic use, it is in every sense to be preferred. It is more convenient for table use, and more wholesome. Beeswax is indigestible in the strongest acid—nitro-muriatic does not affect it. In a pretty syrup-cup, or a handsome glass bottle, it is always convenient and attractive, and an ornament to the table—toothsome, and wholesome to the stomach.

It is easier to control an apiary for extracted honey than for comb honey. Extracting from the brood-frames gives the queen ample room to deposit eggs, consequently the hive can always be populous. By using the extractor with a two-story hive, the apiarist can give each colony of bees plenty of room both to store honey and for the rearing of brood. By this means, the swarming trouble can be entirely overcome, and the bee-keeper does not need to be constantly with his bees, as does the producer of comb honey. Thus he can control a much larger apiary.

As a commercial article, extracted honey is easy to handle. It can be put into tin pails, tin cans, or barrels, and shipped anywhere by freight, thus making a cheap transportation without breakage or leakage; while comb honey must be sent by express, costing more, and often arriving in a broken and damaged condition.

MARKETING EXTRACTED HONEY.

After noting all the advantages to be obtained by the extracted method, we naturally inquire why it is that honey is not entirely produced in this form—and it is indeed a serious question to the producer. While we find all the foregoing advantages, there is one drawback—that is, it is slow to market—hard to convert into the much-needed cash. There are many reasons why this is so, and to overcome them, should be our future work.

The reasons for the slow consumption of extracted honey are these:

1. People associate the liquid extracted honey with strained honey. In olden times, before the extractor was invented, it was the custom, every fall, to kill off a part of the bees, and take the honey. This honey came from the brood-chamber—a mixture of honey, pollen, young bees, larvæ, etc. This was all mashed together in a tub, and placed in a bag which was hung up to drain. The honey was dark and strong, and flavored with bee-bread and other impurities. Up to the present time, many people, in asking for extracted honey, call it "strained honey," and it is sad, but very true, that many do not know the difference.

2. When extracted honey first came into use, it brought a good, round price, and there was an opportunity for the unscrupulous to adulterate with sweets that could be had cheap, and in this way make a handsome profit. Soon our markets were flooded with the spurious stuff, and the innocent had to suffer, and soon became very suspicious of all liquid honey. To guard against fraud, they concluded to buy nothing but comb honey, at the same time admitting that they would prefer extracted, if they could get that which they knew was pure.

3. Another cause for complaint is, that when the extractor first came into use, the apiarist, for lack of experience, extracted the honey before it was thoroughly ripe, and a great deal of honey was put on the market in its unripe condition, and often fermented on the grocer's hands, and proved so unsatisfactory that he desired no more. He was confident that the honey had been "doctored," for he was very sure that pure honey would act in no such way!

4. Still another objection to extracted honey is, that it candies. The merchant or consumer gets the honey clear and beautiful, but soon a cloudy appearance comes, and later the honey becomes solid. This is not understood, and the party is very sure that the honey is not pure, for, says he, "It has returned to sugar." If the matter had been understood, it would have been a guarantee that the article *is* pure, and a little patience in applying heat would have returned the honey to its original beautiful state.

These four points, I think, cover all the objections, and have been the cause of the wide-spread prejudice which exists against the extracted-honey trade. Before we can hope to see the consumption of extracted honey which should exist, we must enlighten the world, and show to the people that these objections exist in theory, and not in reality; that strained honey is a thing of the past; that now extracted honey is sold so cheap that there is no cause for adulteration.

We should use every opportunity to make the consumer familiar with the process of extracting the honey from the comb, and let them see that extracted honey is identically the same thing as comb honey—the honey without the wax; that we so thoroughly understand our business, that we would no more think of selling our honey unripe, than we would sell fruit in its unripe state; and that when honey candies, it is a guarantee that it is pure, and by applying heat it will quickly return the honey to its original state, without the least injury.

To gain this confidence, let each producer begin near at home to build up his market where people have confidence that the article is all it is recommended to be. Let him sell all that is possible in this way, by selling for cash or for trade. It can often be used to pay small debts, and trade for needed articles for the family use. Thus the doctor, shoemaker, and the blacksmith can be settled with wholly, or in part, by extracted honey.

When we have exhausted our home market, we should try our retail grocers. We should begin by giving them all the "light" on the nature of the honey, and the bees that gathered it. Educate them to know that it is the pure article; that when it candies, it is a proof of purity; and that it takes only a trifle of time to heat it and bring it back to the original state.

If the retail grocer cannot use it all, and we wish to go to the large city, and consign our honey, let us put it in the hands of the wholesale merchant, who is making it a specialty, and is willing to spend some time in pushing it.

PACKAGES FOR EXTRACTED HONEY.

In putting it on the market, we should use all taste possible, to put it up in the most attractive shape. Little, bright tin-pails, holding from one pound upward, can be procured very cheaply, and these, with a neat label with the apiarist's name and address, and notice of how to reduce it to the liquid form, make a very attractive package, as well as a very convenient one.

The most convenient package for storage, when honey is extracted, is the ten-quart pail, with patent bottom, cover, and bail. They can be had for less than one cent per pound for the honey which they contain, will last for years, and are always ready to ship or to heat over. They hold 30 pounds, and by passing a wire from lug to lug over the cover, they can be shipped anywhere by freight without any boxing.

Every apiarist should aim to keep his apiary, his extractor, and receptacles neat and clean, so that when visitors come, everything will have an inviting appearance, and his visitor will be so captivated that he will be sure to take with him a good supply of the coveted sweet.

We should, in these ways, be able to spread the consumption of honey until this beautiful land of ours will be one literally "flowing with milk and honey."

Greeley, Colo.

SWARM-HIVER.

Another Claims the Self-Hiver Described by Mr. Alley.

Written for the American Bee Journal

BY GEO. W. STEPHENS.

In the *Apiculturist* for January, and also on page 27 of the AMERICAN BEE JOURNAL, Mr. Henry Alley describes a device for automatically hiving swarms.

In the summer of 1888, I invented and used in my apiary, this same device. My tube was made of screen-wire, at each end of which was attached a cone made like the cones in the Alley drone-trap. This tube connected two drone-traps attached to two hives, as shown in Mr. Alley's illustration. The cones were placed on the tube so that the small ends pointed toward the empty hive.

I will not attempt a further description of the device, as Mr. Alley has fully described it in his article. His invention and mine are practically and specifically the same.

I did not use the hiver last summer, because we had a very unfavorable season, and my bees did not swarm at all. I thought that I would test the arrangement a little further next season, and then either apply for a patent, or donate it to the fraternity. But Mr. Alley has forestalled me in the matter, and has already applied for a patent; but as we have each unwittingly invented the same device, I hardly think it would be fair that letters patent should be issued, giving Mr. Alley the exclusive control of a valuable invention—valuable, because its use in an apiary will enable the bee-keeper to attend church, or to indulge in a midday "snooze" in the friendly shade of a classic linden.

As some might think my claim to this invention is a case of "mistaken identity," I respectfully refer them to Mr. N. J. Wheeler, Clerk of the District Court of this county, who also had bees in the same yard, and who helped me watch the device nearly all summer; Prof. Z. T. Hawk, of Audubon, Iowa, who saw the tube, and is well known as a writer for the bee-periodicals, and Mr. Theodore Walker, a real estate agent and bee-keeper, of this town.

I have written to the Patent Office at Washington, in regard to the matter, and will endeavor to stay proceedings, if it is not too late, as it certainly would be unfair for Mr. Alley, and perhaps for either of us, to have exclusive control of the invention.

Denison, Iowa, Jan. 9, 1890.

HONEY.

It is Digested Nectar—Milk is Digested Grass.

Written for the American Bee Journal

BY WM. F. KANZLER.

The readers of the valuable AMERICAN BEE JOURNAL are under very great obligation for the able report of the International Convention held at Brantford, Ont., for, "Who brings much, brings some to everybody!"

Among the many good essays, I learned the most from Prof. Cook's, on "The Alimentary Apparatus of Bees," because the idea that the digestion of the nectar goes on while in transit from the flower to the hive, was very new to me, and gave me the key to solve some observations which I had formerly made, viz:

When I fed the bees on my porch in the fall some afternoon, and the sun shone brightly, and stood some 20° to 35° over the horizon, and I stood so that the bees, in flying home, came between me and the sun—then I saw that most of the bees did not fly off in a hurry, but circled around and turned their faces to the porch, and spirted a long stream of watery stuff in the air, against the house (some the other way); but very few would fly away without spirting, and emptying themselves, and on the shavings which covered the food, and on the floor, even, was a sticky, adhesive matter. Now I understand these things—it is *the first step in digestion,* to get rid of the over-plus of water, or other watery matter.

Sometimes in the spring and summer, I saw that some bees, in flying out of the hive, were spirting a stream of water before them, and emptying themselves before they gathered a load of nectar—perhaps they had too much water in the hive, or on the bottom-board. So we see that digestion goes on very quickly.

It is impossible for me to find fault with the word "digestion." Is not milk digested grass and hay? and are not eggs digested worms, and bugs, and slugs? If you find your neighbor at breakfast eating eggs, and you say, "Friend, you are eating digested worms, grubs, and slugs," what would he answer? He would reply, "Never mind, they are dead now, and transformed into nice, fresh eggs—the very thing for my old, weak stomach." And so with milk and honey; the eaters of them, and the people generally, will not ask questions about digesting, if the eatables are nice and fresh, and taste well.

Even if honey is only half-digested nectar, it saves our system half the labor of digestion, and is also a benefit to us; and besides this, it is a scientific expression, and was used long before our learned Prof. Cook put his first boots on; and all those who say that he shall take back the "digested part of it," are like a certain man in Italy, who said, "Science must turn back!" But this is an impossibility, and never can, or shall, or will, be done; for our world moves from west to east, and nobody can make it turn the other way.

Science is seeking the truth, and cannot listen to anybody's feelings or sentiments, and I would lose my self-respect if I should find fault with a scientific expression, while I could not give a better one.

At Brantford, Prof. Cook was supported by that learned man, Mr. S. Corneil, whom we bee-keepers this side of the line hold in great esteem for the many services that he has rendered us in enlightening us on many difficult questions in bee-lore; and also Dr.

Harvey and Mr. McKnight sustained the "digested nectar."

If we all live this year, Prof. Cook can prove his theory by experiments (if he has not already done so), that the digestion goes on from flower to hive, by catching, on the entrance-board, some 10 or 20 bees before they enter the hive, and dissect them at intervals of 3 to 5 minutes, to see the progress of digestion going on.

Fulda, Ind.

GOLDEN-ROD.

Honey from the Golden-Rod and White Daisy.

Written for the American Bee Journal

BY E. W. COUNCILMAN.

There has been so much written about golden-rod in the bee-papers during the past season, that I had thought the subject entirely exhausted, but still the articles come. One man, away up in Aroostook county, Maine, claims that bees get no honey from golden-rod, and another in the same State claims that it is a splendid honey-producer. Another bee-keeper, away out in Iowa, says that he never saw but one bee on a golden-rod flower, and that looked like a "scared bee;" another, a little this side, in Wisconsin, claims that his bees have done splendidly on golden-rod, gathering a fine lot of rich, amber honey, for which he obtained as good a price as he did for his clover honey.

Thus it has gone all the fall. The little "joker" was first under one thimble, and then under the other. The fact is, many men are not careful in their observations, before showing their conclusions.

In this locality, for three consecutive seasons, we have had a very poor honey season, and bees have been compelled to work on anything from which they could get a living—golden-rod, white daisies, yes, even Jacob's-ladder; I do not know positively whether they got honey from these flowers, for I did not ask them to let me smell of their breath, or taste of what they were getting; but this I do know, they worked busily on all of these flowers, and would leave buckwheat untouched, to work on golden-rod "from early morn to dewy eve," day after day—and I never supposed bees worked for fun; in my experience with them, whenever they undertook to do anything, they meant business—at least, they have made for me more "business," sometimes, than I could well attend to!

Whether the bees got honey from golden-rod, or not, they worked on it profusely, and in preference to buckwheat, and we got nearly, if not quite, as much of the amber honey as we did of the white honey, and but very little of it was buckwheat.

Many old bee-keepers claim that bees get no honey from white daisies; that bees went "light" on it, except to rest themselves. This I know to be untrue. When my bees have been bringing in yellow honey, and when they would alight at the entrance, the slight jar it would give them, would cause the dust to fall from their little bodies, so that the entrance would be covered with yellow dust.

I have been to the fields, and saw them working on the white-daisy fields—why, it would look and sound like a buckwheat field in full bloom, and their little bodies seemed to be literally covered with the daisy dust, and they were not packing it on their legs, either; they were as "busy as bees." traveling all over those large sunflower-shaped daisies, and plugging them with their slender bills—acting just as though they *were* getting honey, and I believe they were. I also believe that when they work so industriously on golden-rod, passing other honey-producing flowers by, they are getting honey. The true theory is this: Some flowers produce honey in one season, and other flowers produce honey another season, and bees take the honey wherever they can find it; and if the necessity requires it, they will not scruple to get it from a neighboring hive, for a bee has no conscience, or is it at all scrupulous when on a foraging expedition.

Newark Valley, N. Y.

GERMANY.

A Very Interesting Gathering of German Bee-Keepers.

Translated for the American Bee Journal

BY REV. STEPHEN ROESE.

I have just forwarded to the *Deutsche Imker aus Boehmen*, brief notes from the proceedings of the International Convention, held at Brantford, Ont., translated into German.

The December number of the above bee-paper, has just arrived, and reports, among other articles, one item of special interest, being a report of the grand gathering of the 3rd annual Wanderversamlung (traveling gathering) and Exhibition of the German Bee-Keepers' Central Union, held at Stettin, Prussia, on Sept. 6th to the 9th, with the opening address of the Honorary President, Graf. Behr, of Regendank. The many hundreds of bee-keepers from all parts of the country, mingled their voices in three cheers for the Deutsche Kaiser, after which the bee-keeping fraternity was welcomed by an able address, from the Chief-Burgomaster of the city, which was followed by a speech from Judge Kollings, of Fallersleben, criticising representative Letocha's new law on apiculture, now before the Agrar-Commission of the Prussian Legislature, to take effect on Oct. 1, 1890.

Teacher Lehzen, of Hanover, raised the question, "How can bee-keeping be made most profitable?" and recommended the home (German) honey-bee, and cheaply prepared hives.

The grand bee-master, J. G. Kanitz, of Friedland, East Prussia, stated that where winter lasts as it does in their Polar bear country, for five to six months, to achieve success in bee-keeping, a new method must be adopted; after which Pastor Rabbone, President of the Central Union, spoke very flatteringly concerning the growth and interest of the Union, and bee-keeping in general, during the past year.

The meeting closed with a feeling of great enthusiasm, and another three cheers was given for the Presiding Faculties of the Union.

In connection with the Wanderversamlung, was held an exhibition of live bees, hives, apiarian supplies and products, and it was astonishing, for the catalogue of exhibits in its five departments contained 594 exhibitors, and, as a matter of course, the innumerable articles on exhibition could not receive very special attention in the part of the great throng of visiting inspectors, but the impression made upon this occasion seemed to deeply affect both the bee-keepers and the visiting public.

The great throng of people passed from the "Birken-Allee" inn, into the stone wall-enclosed garden, which was dotted to the right and left with hives of live bees, of various styles and shapes. On the out-skirt of the beautiful, large garden, stood a large building, with immense sized halls, for the reception of the nectar sweets, and other purposes; an adjoining room contained a large library of books on apiculture, of both early and recent dates, and with it every volume of the *Preusische Bienen-Zeitung* (Prussian Bee-Gazette) from 1855 to 1889; established by Grand Bee-Master J. G. Kanitz; and in order to make this gathering of bee-keepers memorable, the committee had arranged, first, a view of the city; next, a steamer ride on the River Oder, to Frauendorf (Ladiestown), where, on Elisershoche (Lizzie's heights), the Stettin Teachers' Association surprised the bee-keeping fraternity with a number of beautiful choral songs, sounding through the air.

On Sunday, Sept. 8, at 5 p.m., the welcome guests (bee-keepers) dined in the Wolfs-garden; and on Monday, the great drama of bee-keepers' exploits came to a close, by a steamer ride on the ocean from the Bay by Swinmunde to Herringsdorf, where the glad tidings were received that his Majesty, King Wilhelm II., of Prussia, and Emperor of Germany, had presented the Royal Seminary teacher, Illgen, of Pommern (for his service in advancing apiculture) with the Royal Kronen Order, 4th class; which fact rendered this meeting very memorable for many.

Maiden Rock, Wis.

CHIT-CHAT.

A Whirl Through the Dizzy Apicultural World.

Written for the American Bee Journal

BY E. L. PRATT.

The storm has passed—the blue skies show signs of continued pleasant weather once more. The "Bees by ½-pound by mail" question has been laid upon the shelf for repairs, and future reference. Let it "R. I. P."

There is a very witty woman writing on bee-matters, under the *nom de plume* of "Kit Clover." She is a novice in bee-culture, but her pen is as keen and pointed as a bee's sting.

Are we to understand by that clipping from the Fremont local paper, on page 19, that Mr. Hilton really has as many babies to care for as he has honey-bees?

"A Hallamshire bee-keeper" is an Englishman, but his writings savor of the Yankee brevity and terseness. S. Simmins is another "English Yankee" in his writings.

Very few seem to understand the value of early advertising. The most successful firms are those who keep their advertisements before the public the year round.

Ivar S. Young is still in that apicultural *consomme*. Mr. Holtermann was not successful in fishing him out, although in possession of the "Pole" and "Ring."

Mr. C. J. Robinson may know that I have repented of all I said about "beautiful women" in connection with "light Italians." I am in receipt of letters from several of them, but I shall not have them published, however.

Mr. L. A. Aspinwall is trying (?) to boycott the comb foundation trade, by using wooden combs in the brood-chamber. I wonder what the Dadants *think* of that scheme.

Now is the summer of our discontent made glorious by a little piece of perforated metal, to automatically hive bees that swarm. Henry Alley has opened an avenue here, that is going to widen as broad as the world.

Mr. James Heddon (h-m) seems to have become disgusted with us all, and withdrawn somewhat from apicultural literary work. What's the trouble? Mr. H. is generally prompt with his responses.

I always used to get Dr. Miller and Dr. Mason mixed up, but since I have been "sat upon" by one of these worthy "fathers of apiculture," I believe I can tell "which is which."

The Carniolan-Italian race-war will soon wage again. It is going to be "nip and tuck" between these two races, ere long.

The English bee-publications have now made decided changes in their management. Hon. T. W. Cowan continues as editor, however, of the Weekly.

My father has for some time been urging me to devote a bee-yard wholly to the production of wax, as Mr. Doolittle thinks of doing. He has great faith in the undertaking. I have not so much.

One of the Root-discarded "hobbies" is being brought to a success by foreign apiculturists. Artificial heat for bees in spring may yet prove practical.

I wish I knew Mrs. L. Harrison well enough to be "on speaking terms" with her; but you know I have a natural awe for the opposite sex!

Why not call "4¼x4¼ by seven-to-the-foot" the "standard" section?

Neighbor J. E. Pond and several others, including myself, have been aware for some time that the construction of the top-bars had *considerable* to do with the burr-comb prevention.

Dr. Tinker is keeping back some valuable discoveries in connection with perforated metal. Can't some one make the Doctor tell?

We are preparing for a "big season" in 1890, at the "Pratt bee-farm."

Marlboro, Mass.

SELF-HIVER.

A Self-Hiving Arrangement and How it is Used.

Written for the American Bee Journal

BY WESLEY DIBBLE.

Some one has said, away back in the BEE JOURNAL, you can tell a practical bee-keeper by his writings; by the same you can tell if he keeps bees in his mind. This has caused me not to state a good many of my little experiments. I have read a good many articles where I thought the writer keeps bees "in his mind." I obtained Doolittle's "Scientific Queen-Rearing," as soon as it was published, and the benefit of that book to me is worth hundreds of dollars. I consider its author head and shoulders ahead of any bee-writer in the valuable AMERICAN BEE JOURNAL. My reasons for thinking so, are these:

He tells us plainly all of his experiments, in a way that all can understand. As fast as he can write success on any of his experiments, we get them, and all without reserve. When Mr. Doolittle treats us to something really *new*, how surprising it is that a certain few have been practicing the same thing so long!

The same thing will be said of me, when I say that I practiced, the past season, something new, and as far as I know, it had never been published until Mr. Alley gave it to us on page 27, calling it a "Novel Self-Hiving Arrangement." My plan varies a little from Mr. Alley's, and I will give it here, as I practiced it last season, and shall adopt it in three of my out-apiaries next season. It is as follows:

Commence by using the plan of Mr. Heddon's bottom-board and stand—any size to fit the hives. Place two of them side by side, and on the bottom-board place a queen-excluding honey-board on each of them. Now place the hives on, and connect the two hives with a wire-cloth tunnel, one inch in diameter, and 4 or 5 inches long. One end of this tunnel must be cone-shaped, and this end goes into the empty hive (supposing the colony in the other hive is ready to swarm).

Connect the hives as near the front as possible, and just above the queen-excluding honey-board; now it is ready for swarms without a failure, and the front of the hive will not be blocked up by any Alley traps.

The same plan will work by placing the empty hive on top of the one ready to swarm, and connecting the two in the same way, except the tunnels must be long enough to connect the two hives, and the cone must be in both ends of the tunnel. With this plan, the distance from one hive to the other is so far, that the queen is liable to return to the hive from which she came, unless the cone is arranged to prevent her from returning after she leaves the parent colony. With this last plan, I think that I can see something valuable, which I want to give a thorough trial before saying anything positive about it. I am not fully satisfied with my experiments so far.

THE SEASON OF 1889.

I am getting everything ready this winter, and expect to care for 400 colonies of bees next season alone, excepting the aid of my son and wife. The bees will be in four different yards, seven miles from home. I placed 100 colonies seven miles from home the past season, and my method of manipulation was successful; I think that I did not lose one swarm; and the proceeds of that yard was satisfactory to me, for the season was very poor in this section of the country.

My crop was 6,000 pounds of marketable honey. It netted me 12½ cents per pound, at our depot, or at my honey-house.

Middleburgh, N. Y., Jan. 10, 1890.

The Report of the proceedings of the 20th annual session of the International American Bee-Association is now published. The price is 25 cts., postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

HIVES.

Double-Walled vs. Single-Walled Hives for Winter.

Written for the American Bee Journal

BY DR. G. L. TINKER.

In determining which is the better, a double or a single walled hive for practical results, we are to consider not alone the "winter problem."

At the late International Convention, where the matter was fully discussed, it was not, nor can it be, shown that a properly-constructed double-walled hive, packed with suitable material, will not winter bees as well as the single-walled-hive in the best of cellars. Though it was shown, I think conclusively, that there is a small saving of stores by cellar-wintering, I think it must also be conceded that it is, on the whole, the most economical system of wintering. Here, then, are two points conceded in favor of single-walled hives; but I propose to show that they are more than offset by the superior advantages of the double-walled hive in spring and summer.

The saving of stores by cellar wintering is not more than four pounds to the colony, and the saving in the cost of hives is not more than the value of four pounds of honey per year.

Now we come to spring breeding, and my experience is, that there is a net saving of not less than ten pounds of stores to the colony, by the use of the double-walled hive up to the first of June, in this locality, and I believe the saving would be still greater at any point further north.

If we calculate, then, from Nov. 1st till June 1st, we have a saving of at least six pounds of stores, in double-walled hives, over the best possible showing in single-walled hives. But we are not to stop here. There is another advantage in double-walled hives, that has not heretofore been recorded, and it is the chief consideration with me, in deciding in favor of them, viz: *We can rear one-third more brood and bees in a double than in a single walled hive by the first of June!*

The facts and figures to prove the above point, will be given later. I will here simply allude to the fact that bees in protected hives in the spring, are stronger, and are able to gather stores and breast strong, cold winds, when the bees from single-walled hives being comparatively weak, fall to the ground, or become chilled on the flowers and die. The cause of this state of things is undoubtedly due to the greater labor required to keep the brood warm during the cool nights and days of April and May, in single-walled hives.

Thus it will be seen that the two points above conceded to the credit of the single-walled hive, become a small matter when we compare the grand results that can be achieved with the double-walled hive in spring breeding, preparatory to securing a crop of honey.

But I shall fall short of doing this subject justice, if I do not say something upon the proper construction of double-walled hives, and their winter and spring management. I know that many have failed with such hives, and I think that I know why. I have said (and I desire to emphasize the fact) that a chaff hive with damp packing, and damp walls and combs, is a poor place for bees. Indeed, it is far inferior to a single-walled hive in outdoor wintering, if it is allowed to get in such a condition; and I know that the ordinary management of these hives leads to more or less dampness, which is death to the bees, or there is a partial or complete failure in results. Double-walled hives, then, must be kept dry, and the packing must be thoroughly dry to begin with.

Again, the packing must be quite porous, or it will require to be often changed. Thus, fine sawdust, clover and oat chaff, that mat down close, are objectionable. Forest leaves, planer shavings from dry wood, and the excelsior sawdust obtained in sawing sections, is preferred; and from 2½ to 3 inches of packing about the brood-chamber is enough.

DAMPNESS IN HIVES.

In preventing dampness, I rely much upon proper ventilation, and practice two methods, both of which succeed well. The first is free bottom ventilation, and it seems best adapted to this locality. The second is upward ventilation, in connection with a small entrance (2 inches by ⅜). This latter system seems better adapted to points further north, but I am not sure that it is.

With free bottom ventilation there is more and purer air furnished the bees, and they appear to be able to keep the hive as warm as by the other plan, as the following will show:

About 50 miles due west of here, are quite a number of apiaries of from 10 to 50 colonies of pure black bees in box-hives, where for more than fifty years they have held their own, and where, up to this time, the frame hive and the modern system of bee-keeping have been unknown, or ignored.

What impressed me the most was the fact that all of these hives, without exception, were placed on four small, flat stones from ¾ to 1 inch thick, and they were left so the year around. I inquired of one old and intelligent bee-keeper, why he let so much air in at the bottom of his hives, and he replied that they could not winter their bees in any other way (!); that the combs and hives, without the large openings at the bottom, would become damp, and the bees would die; that as long as the hive and combs were dry, the bees were never injured by the cold! I suppose I have seen the same fact stated in the bee-papers a hundred times, and yet it does not appear that the mass of bee-keepers are profiting by it.

BEST METHODS OF HIVE-VENTILATION.

It is now a well known fact that bees in winter, at intervals of three to five days, arouse from their torpid condition, and feed. During the intervals, they take no food until the sense of hunger again arouses them. This is an interrupted hibernation. I have thought that they often go as long as a week without food, but when they do rouse up, they raise the temperature and warm up their stores before they can feed, and in the operation they set in motion active currents of air.

Now I have shown that bees cannot properly ventilate a hive except from the bottom, and the experiments of Mr. Corneil (see page 819 of the BEE JOURNAL for 1889), have shown that free bottom ventilation cannot be had through a horizontal entrance of the usual size, without other openings in the bottom or other part of the hive. Bees, then, may at their feeding times ventilate and dry out their hives in winter to some extent, where free bottom ventilation is provided for.

The plan that I have tried, and which seems to answer every purpose, is to give a full entrance (⅜x12 inches), and in the bottom of the winter-case, at the rear end of the brood-chamber, make five one-inch auger-holes, which are to be covered with tinned wire-cloth. Upward ventilation is prevented as far as possible by the use of an inside cover for the brood-chamber, made of wood. The hive rests near the ground, and a few leaves are placed loosely beneath, to keep the bees from trying to get under the hive, when they can fly, where the auger-holes are located. The hives are painted on the bottom, and the dampness of the ground does not affect the hive or bees.

With the above arrangement, the packing gets only a trifle damp, which is soon dried out by taking off the cover of the winter case once in two or three weeks, when the sun shines clear. If the packing gets quite damp over the brood-chamber (and it often gets so on the cool days of spring), I throw it all out to dry on the cover, which is inverted on the ground. The sun is also allowed to shine full upon the inside cover of the brood-chamber. The effect of this treatment on the bees in the spring, is very remarkable, and especially upon the laying of the queen and the rapid extension of the brood. The covers are usually taken off about 10 a.m., and returned at 4 p.m.

Where upward ventilation is given, the entrance is closed to 2 inches by ⅜, and no holes are made in the bottom of the hive. Over the brood-frames is laid two thicknesses of cheap cotton-cloth, and 4 or 5 inches of packing. I prefer the cloth to lay flat on the frames without cross-sticks for passage-ways. With this arrangement, after a few weeks of cold weather, the surface of the packing will become quite wet, while it is warm and dry beneath. I use mostly the excelsior sawdust on the brood-chamber, loose, as it can be handled almost as easily as a cushion, and is readily dried out, while the cushion is not. When ready for the sections, it may be taken out and stored in barrels; but the packing around the first story is left in place, as a rule, all the year.

A properly-constructed double-walled hive is simply a winter case for a single-walled hive. It should not be constructed all in one, as the packing, if it becomes damp, cannot be removed to dry it out. My winter case is made of thin boards, 9-32 of an inch thick by 20 inches long, nailed up and down to a frame at the top and bottom. The bottom and cover are also lined with the same thin stuff, and the whole, with the flat tin roof, weighs under 25 pounds. It is light, easy to handle, and very durable. After five years' use, I have yet to lose a colony in them. In summer I take most of the packing away, when they make excellent summer hives.

In conclusion, allow me again to invite the attention of bee-keepers to the matter of bottom ventilation for winter hives.

New Philadelphia, Ohio.

QUEEN-CELLS.

Reply to Questions About Eggs in Queen-Cells.

Written for the American Bee Journal

BY C. P. DADANT.

In reply to Mr. Latham's questions on page 8, I wish to say at the start, that I do not assert that the queen does not lay eggs in queen-cells, but simply that I do not believe that she does so.

Mr. Latham asks why the bees never put an egg in an old queen-cell, instead of tearing down and building around it, when a queen is removed. I believe the answer is in the fact that they do not rear their queens from *eggs*, in these circumstances, but from already hatched *larvæ*, and I believe the reason of this is, that they are in a hurry—much more so than when they want to swarm, as there is no condition on earth that displeases them so much as to be queenless. I have never yet seen a queenless colony start a queen-cell from the egg; whether they ever do, I do not know. It is evident that they cannot transport a larva, as they do an egg, and so this would answer Mr. Latham's question.

In answer to the second question, I will say that whenever the foundation gets so stretched as to be of the same size as drone-cells, the queen does lay drone-eggs in it. That is why so many have imagined that the bees could change worker foundation into drone foundation, which they do not.

The third question asked by Mr. Latham, is answered by the reply to the first.

This question is of but little weight, but I certainly do not think that the queen lays eggs in queen-cells, and my main reason is, that I know how she hates to see others in those queen-cells, and how eagerly she destroys them whenever permitted to do so by the bees. I have seen queens, time and again, working hard, tearing up rival cells, and even if I am mistaken in my opinion, and a queen does lay in queen-cells, it is hardly fair to call it "all nonsense" to believe as I do—though I feel satisfied that Mr. Latham does not mean it harshly.

Hamilton, Ills.

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CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Feb. 5.—Northeastern Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Flint, Mich.

Feb. 5.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 5-7.—New York State, at Rochester, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

Feb. 19-20.—Ohio State, at Cleveland, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 19-20.—N. E. Ohio, N. W. Pa., and Western New York, at Cleveland, Ohio.
Geo. Spitler, Sec., Mosiertown, Pa.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Temperature of December, etc.

The mean temperature of December, in 1886, was 22 degrees above zero; in 1887, 30¼ degrees above zero; in 1888, 32 1-10 degrees above zero; in 1889, 48¼ degrees above zero. I am wintering 12 colonies of bees on the summer stands, mostly in the new Heddon hive, without any protection; some have a section-case on top of the brood-chamber, without any cloth or quilt over the brood-chamber. So far there have been less dead bees than any winter since I commenced the business. What the result may be in the spring, time will prove. Possibly I may give the result at the proper time. P. J. BATES.

White Hall, Ills., Jan. 10, 1890.

No Winter in Texas.

We have had no winter here yet. Mustard is four feet high, and in bloom. Peaches, plums, tomatoes and many other plants are also in bloom. Corn and cotton are growing in the fields. The bees are on the wing every day. My bees did but little last season—only made a living. Out of 40 hives, I extracted about 200 pounds of honey. J. C. BELL.

Belton, Tex., Jan. 9, 1890.

Warm Weather—Bees all Right.

I read with great interest the report of the Michigan Bee-Keepers' Convention, and I feel especially proud of the closing part—those bee-keepers came together for business! The weather here is very, very mild this winter—in fact, we have had no winter at all so far. Christmas day was as warm and lovely as a beautiful day in the middle of May. This was a great day for the bees, as they flew in great numbers. Bees are flying some almost every day. Fruit-trees are budding, dandelions are blooming, and hyacinths and other bulbous plants are pushing their flower-buds above ground. Old settlers say that from Dec. 1 to the middle of January, never in their recollection has the weather been so warm. My 24 colonies of bees are all, apparently, in the best condition, with plenty of honey. To work with my bees occasionally, is a scource of pleasure and recreation from my regular work; also the reading of the valuable AMERICAN BEE JOURNAL gives the monotony of my business a cheerful turn.

New Philadelphia, O. DANIEL WYSS.

Good Honey Crop—Golden-Rod.

The honey crop of this part of Iowa for 1889 was splendid. I commenced the season with 14 colonies, and took 1,800 pounds, mostly comb honey in one and two pound sections. I increased my apiary to 49 colonies, with plenty of surplus for winter. I fear that bees that were put into winter quarters early, will not winter well. The weather has been too warm, until this week, and they were very restless. The temperature was as high as 56 degrees, and the cellars could not be cooled except at night. As all are giving their opinion of golden-rod as a honey-plant, I will say that I have watched it very closely, to see if bees worked on it, and I have always found it full of ugly black bugs, but no bees, and for this section of country, I would pronounce it a troublesome weed, which is spreading very fast.

Thos. O. Hines.
Anamosa, Iowa, Jan. 18, 1890.

Poor Yield of Honey.

Bees did not do very well in this immediate locality last season. I had 123 colonies, spring count, and increased them to 150, by natural swarming. I doubled up the new swarms, and secured most of my surplus from them, which was about 1,500 pounds.

A. L. Shirck.
Glasford, Ills., Jan. 11, 1890.

Bees Doing Well Out-of-Doors.

I started with 75 colonies last spring, and harvested five tons of honey, 1,000 pounds of it being comb honey. I increased my apiary to 96 colonies. I sold the comb honey at 15 cents per pound, and I am selling extracted at 10 cents. My bees are doing nicely on the summer stands, and have a flight almost every day. I do not expect to pack them away until it gets below zero.

F. A. Gibson.
Racine, Wis., Jan. 18, 1890.

Bees are a Good Investment.

When I first began to read the Bee Journal, some five or six years ago, my stock of bees was 5 colonies in box hives; that year I bought 25 chaff hives, and have since increased the 5 colonies, by natural swarming, to 45. I have taken for the half shares, 29 colonies of one of my neighbors, making in all 74 colonies in chaff hives to care for. My bees are paying a better per cent. for the amount invested, than any other thing that I have on 43 acres of as good land as there is in the State of New York. I am not working for increase, but for nice comb honey in 1 and 1½ pound sections. I sold my last year's crop in the home market, at 12½ to 15 cents per pound, and I am now out of honey.

Etna, N. Y. G. W. S. Gibson.

Blooming Flowers in January.

I send samples of flowers picked this day with my own hands, that are growing here at the present time—peach-blooms from my own tree, Japonicas, bridal-wreath, and silver willows from the yards of my neighbors, and maple from our street sides. The maple trees are, in many instances, in full bloom, and my bees came in yesterday and to-day heavily laden with pollen. We have had no winter here, to amount to anything; the ground has not been frozen a quarter of an inch deep this winter. I am writing in a drug-store, without fire to-day. Japonicas are in full bloom all over this town; sweet violets are in full bloom also. There are a few peach-blooms, and also some plums, yet the latter are scarce. The maples are about all in bloom, and the outlook for spring pollen looks gloomy, unless the maples bloom again in the spring. There is plenty of young brood to be found in the hives, and there is no telling what the result will be, if there should be any severe winter weather. The honey crop last year was not good, on account of June and July rains. The fall honey crop was ruined by drouth, and as a result many have had to feed syrup to carry their bees through.

Ira Reeves.
Carmi, Ills., Jan. 11, 1890.

[This is indeed a peculiar winter season. What the spring may unfold, no one can yet foretell. If frosts come late in the spring, great damage will result. We can do naught but await the result with bated breath—hoping for the best, even if fearing the worst.—Ed.]

Bees in First-Class Condition.

It is warm enough for bees to safely fly here this morning. The ground is still bare and unfrozen, with not a bit of frost, and bees are in first-class condition; they do not want to fly at all. Judging the possibilities of the future by the past, I do not think that we *can* have any weather from now out, which will kill bees. I am lucky enough to have four-fifths of my bees out (only 70 colonies in the cellar), all packed in dark-red boxes.

James Heddon.
Dowagiac, Mich., Jan. 10, 1890.

Full Sections, King-Bees, etc.

In answer to Query 679, on page 21, I would advise the querist to have his bees store honey in large frames. He can then cut the combs into squares, the size of sections, with a cutter, the same way that a cook cuts dough for biscuits. Slip the squares into the sections, and place them on a hive, where the bees can get at them to make them fast.

We have mostly "king-bees" in this part of the country. I will have some of my neighbor apiarists send the editor one, as mine all died last summer, when I subscribed for the American Bee Journal!

We are having a remarkable winter here, or rather no winter at all. To-day the mercury stands at 72 degrees in the shade, the bees are busy working on the bloom of peach, plum and other trees and shrubbery, and carrying in large quantities of pollen and some honey. The young bees are flying out daily, and what the end will be I cannot tell.

Wilson Rogers.
Love, W. Va., Jan. 12, 1890.

[The blossoms enclosed are forward enough for May. "King-bees," and ignorance generally, disappear when intelligence and progressive truth are manifested.—Ed.]

Loose Bottom-Boards, etc.

I began the season of 1889 with 26 colonies, 9 of which were in poor condition. May was so cold I do not think that the bees had over 30 hours in the whole month, that they could fly and gather honey. It seemed too bad to see the woods so white with wild fruit-blossoms, and no bees at work. But finally the weather became warmer, the white clover came on, and I think that I may safely say there was 500 acres within easy reach of my bees. In July the basswood bloomed; I live on a stream with a great amount of basswood timber, which bloomed profusely, and the blossoms lasted about 15 days, although the weather did not permit the bees to work very steadily on it. Of course the bees were doing well, but the dry weather soon came on, and ripened the clover, but cut the buckwheat rather short, and made honey-gathering from the fall flowers almost a total failure. My receipts for the season were 2,500 pounds of honey in one-pound sections, and an increase from 26 to 51 colonies, with plenty of honey to last them through the winter and another cold spring.

I notice that some apiarists cannot see any practical use in a loose bottom-board. If they will nail their boards to a cleat on each side 1x1½ inches, and also a cleat at the back, they will find, by turning this bottom-board over in the fall, the hive will be raised up from the bottom-board, for the purpose that has been so much discussed of late, and then, as the bees are taken out of the cellar in the spring, by turning the bottom-board again, the bees have a clean and dry floor, and the corners of the hive will not be filled with dead, moldy bees. Then if the bee-keeper wants to do so, he can easily fasten the bottoms on, by using four hook-nails, such as are used to fasten the covers on butter-tubs or tobacco-pails.

C. H. Wooldridge.
Brownville, Iowa, Jan. 12, 1890.

Cold Weather—Alsike Clover.

I have 14 colonies of bees all in Root chaff hives; they are wintering well. We had no winter until Jan. 1, and on Jan. 12 we had a blizzard—not a very bad one, though. The mercury has been as low as 20 degrees below zero two or three times, and the weather continues cold, and threatens more snow. I sowed a half bushel of Alsike clover last year, and expect to sow one bushel the coming spring; some of my neighbors expect to sow some, also. I have the only patch there is around here, many never having seen it growing before.

S. G. Palmer.
Tobias, Nebr., Jan. 18, 1890.

Young Drones Flying.

Down in this part of the bee-world, rain prevented the bees from storing over half a crop—50 pounds to the colony. I have 130 Italian colonies. Comb honey sells at 12½ and 15 cents per pound, and extracted at 10 cents. To-day the temperature is 80 degrees in the shade. Bees are storing nectar and pollen from various flora. My beautiful roses bloom continually. The young drones are out to-day—the first this year!

A. M. Hoyle.
Whistler, Ala., Jan. 7, 1890.

Arranging Hives in the Cellar.

My bees did fairly well the past summer. I had 30 colonies, good and indifferent, to start with in the spring, and they stored an average of 65 pounds of honey per colony, mostly in the comb. I put 40 colonies in the cellar in pretty good condition. I place the hives one foot from the floor, and tier them as high as the room will permit; take off the cover and put on a quilt, and place across the back of the hive a piece of lath as long as the hive is wide, outside measure, putting this cross-piece on top of the quilt. I put the next hive on this, and so on to the top, leaving the cover on the last one. I leave the entrance open the full size, and elevate the rear of the hive; this gives plenty of ventilation, and my bees have not been bothered with bee-diarrhea since adopting this plan.

H. J. Scoles.
Knoxville, Iowa, Jan. 11, 1890.

Hatching Bees—White Clover.

I have 20 colonies of bees packed in sawdust, all wintering finely. They have been at work for six weeks, carrying in pollen, getting it at the mill which is near by. Till the last week, the bees have been at work on the natural bloom, and they are hatching young bees by the scores. I send you a sample of bloom that my bees are at work on this morning—five or six bees to each blossom. They are at work on the maples, and we have peach, strawberry, and quite a variety of wild bloom in the woods. I think that this is hard to beat for January. If it stays warm a few days longer, grass will be long enough for the cows to get hold of. We have the finest stand of white clover that I ever saw. I had a lively time with bees last spring; I am running a blacksmith shop, post-office, and farming some, so when I have two or three swarms of bees in the air, a mail to change, and a horse to shoe, all at the same time, it is tolerably interesting; but with all this work to do, I always have found time to read the BEE JOURNAL; I would rather read it than ony other paper that comes to the office. JOSEPH A. WEEKS.

Young's Creek, Ind., Jan. 12, 1890.

Blooming Pear-Trees—Floods.

Bees gathered pollen on Jan. 11. They must have secured it from soft maple. We had peach-trees and the Japanese pear-trees in bloom, and it seemed that everything was going to bloom, but a small frost now and then will check it some. There is plenty of rain, and high water, the bottoms being flooded from hillside to hillside. Our winter is mild. Bees are wintering well, and there is a fine prospect for a good clover crop. We had only half a crop of honey the past season, the cause being too much rain and bad weather. We expect a better season this year. LOUIS WERNER.

Edwardsville, Ills., Jan. 15, 1890.

No young Bees in the Hives.

I have 103 colonies in the cellar, put in on Nov. 25, 1889. I have not seen the mercury higher than 52 degrees in the cellar; although the weather has been quite warm and spring-like most of the time, they have kept quiet. I never saw so few dead bees before; I think the reason is, that they moved and bred so little during October. It will be a good test of going into winter quarters with no very young bees—probably with none that had not taken a flight. Now the question is, will they live long enough to rear a good lot of bees in the spring, or not. Bees out-doors are breeding quite a good deal. G. H. ASHBY.

Albion, N. Y., Jan. 10, 1890.

Hive for Securing Comb Honey.

I used hives last season with square tops 11 inches wide, which held eight Simplicity brood-frames, spaced 1⅜ inches from center to center, which come flush with the top of the hive—and a loose bottom-board. When the honey season was at hand, I placed a wood-and-zinc honey-board over the brood-frames, which has a bee-space on both sides; over the honey-board I place a 24-section T-super, with a bee-space above the sections. I use a plain board for a cover. The T-supers are made of ⅞-inch lumber. As these T-supers form the upper stories, there need be no outer case or upper stories; which will allow the T-supers to be tiered up two or more high. As we had a poor season for honey, I did not tier more than two supers high, which seems to be about right for a medium-sized colony.

I will now name certain parts of hives that ought to, and will, be laid on the shelf, as honey-producing goes into the hands of extensive bee-keepers and specialists; that is, I think it will be so, on account of the very low price of honey, which calls for a handy hive—a hive that we can handle the crop with the least labor and time, as time lost is money lost. First, is the portico hives—I know whereof I speak, as father used them for seven or eight years, when I was a boy at home; second, the wide frame; third, the open-side sections; fourth, the tight bottom-boards; and fifth, the hives that do not take a standard brood-frame. C. A. BUNCH.

Nye, Ind.

Results of the Past Season.

I winter my bees in a cave made purposely for the bees. Last spring I took out 9 colonies out of 10, in good condition. I increased them to 20, and they produced between $75 and $80 worth of honey, computing it at 10 cents per pound, as that is all we can get here for good comb honey in one-pound sections; but in such seasons as the last, bees will pay well for their keeping. I farmed 120 acres and only cared for my bees during odd spells; I might have done better with them, had I given them proper care. JOHN OLIVA.

Blairstown, Iowa, Jan. 14, 1890.

Poor Crop is the Result.

The weather has been very fine until this morning, and now we are in a heavy snow-storm. I began the season of 1889 with 16 colonies, increased them, by natural swarming, to 33 colonies, and obtained about 400 pounds of comb honey. I could not attend to my bees, and the result is a poor crop. The honey is from wood-sage, fig-wort, wild-cucumber, buckbush, and buckwheat. Bees worked on golden-rod but a few days. We had honey-dew only once, and that was in August. I have 17 colonies in the cellar, and 16 on the summer stands, all of which are doing well. My work with bees in this part of the country is an experiment, and I cannot tell yet whether it will be profitable or not. My father, long ago, used to keep about 40 colonies in the bee-gums in Shelby county, Ills.; but we always had plenty of honey from basswood. No bee-keeper can afford to do without some reliable bee-literature. I often obtain from one copy of the AMERICAN BEE JOURNAL, what the whole 52 copies cost me.

G. W. HANSON.

Chapman, Kans., Jan. 12, 1890.

Bee-Keeping in Wyoming.

I started in the spring of 1889 with 3 colonies, bought 2 more, increased them to 12 colonies, but lost one that was queenless, though I sent for a queen, and my order was overlooked, until it was too late to fill; so I was out a No. 1 colony, that was worth $15 in this part of the country. I got about 160 pounds of comb honey in one-pound sections, which brings a good price here. My bees gathered honey from alfalfa, which I consider an excellent honey-plant, though quite likely it fails in some localities, the same as golden-rod, as that is of no use here, for it blooms too late. My bees are in the cellar, and are doing finely. We are having very cold weather, though not much snow. I use the Langstroth 8 and 10 frame hive, with loose bottom-boards, which I find is more handy. One can clean out the hives more quickly, and save the bees that much work, which is quite a job sometimes for the bees, when the hives are badly choked with dead and moldy bees. I could not do without the AMERICAN BEE JOURNAL, and consider it a valuable paper for all beginners in bee-keeping, as well as for the more experienced. THOS. B. BRUNDAGE.

Sheridan, Wyo. Ter., Jan. 13, 1890.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, *Sec. and Treas.*, Bedford, O.

☞ The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890. GEO. SPITLER, *Sec.*

☞ The Northeastern Michigan Bee-Keeper' Association will hold its eighth annual meeting on Wednesday, Feb. 5, 1890, in the Council Rooms, in the Fire Engine House, at Lapeer, Mich. The first session begins at 10:30 a.m. Low rates at the hotel.
W. Z. HUTCHINSON, *Sec.*

☞ The 21st annual meeting of the New York State Bee-Keepers' Association will be held in the Court House at Rochester, N. Y., on Feb. 5, 6, and 7 1890. Reduced rates will be given at hotels and on all principal railroads. The programme and full particulars will appear in due time. Each county association is requested to send two or more delegates. G. H. KNICKERBOCKER, *Sec.*

☞ The Wisconsin State Bee-Keepers' Association, will hold its Sixth Annual Meeting in the Capitol at Madison, Wis., WEDNESDAY, Feb. 5, 1890. Complete programme of the Convention will be duly mailed to the prominent bee-keepers of the State. A large attendance of bee keepers is anticipated, as the Farmers' meeting takes place the same week. We hope, also, to have a Honey Fair during the meeting. Premiums have been offered for the best display, and of samples of extracted and comb honey. Send to the Secretary for a premium list. Mr. A. I. Root is expected to be present at the meeting. DR. J. W. VANCE, *Sec.*, Madison, Wis.

HONEY AND BEESWAX MARKET.

CHICAGO, Jan. 22.—We quote: White clover 1-lbs., 11½@12½c.; 2-lbs., 10@11c. Basswood 1-lbs., 10½@11c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.
R. A. BURNETT, 161 S. Water St.

DETROIT, Jan. 24.—Comb honey is quoted at 12@14c. Sales slow. Extracted, 7@8c.—Beeswax, 24c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

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☞ We have some full sets of the BEE JOURNAL for 1889, and *new* subscribers can have the full sets for 1889 and 1890 for $1.80 until all are gone.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

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Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 **edition**)	2 25	2 00
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
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51D26t 1m1y.

Our Clubing List.—We have now made arrangements with publishers of metropolitan Weekly Newspapers, by which we can club them at the very low prices quoted in the **LAST** column, without premiums. The regular price of both is given in the first column. One year's subscription for this JOURNAL must be sent with each order for another paper:

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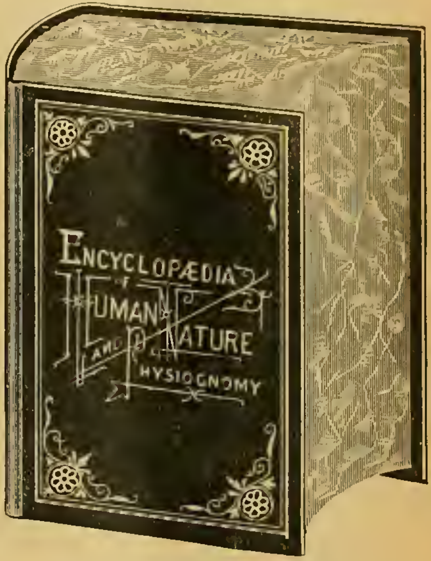
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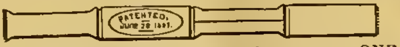
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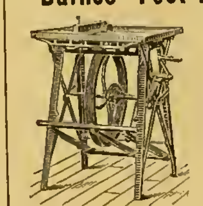

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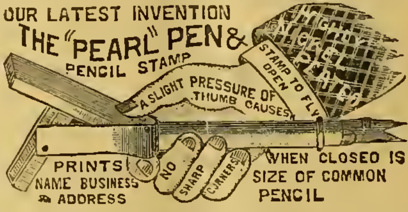
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PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Feb. 8, 1890. No. 6.

The Election of Officers for the National Bee-Keepers' Union closed on Jan. 31, 1890, and resulted as follows: There were 207 ballots cast, and they figure up thus:

For President — James Heddon, 154; scattering, 44; blank, 9.

For Vice-Presidents—G. M. Doolittle, 176; Prof. A. J. Cook, 172; G. W. Demaree, 162; A. I. Root, 176; Dr. C. C. Miller, 178; scattering, 115; blank, 66.

For General Manager, Secretary and Treasurer — Thomas G. Newman, 202; blank, 5.

The old officers are therefore elected by an overwhelming majority. It is a very flattering endorsement for the General Manager that not a single vote was recorded for another person. There were 5 blanks, but 4 of these supposed that the voting closed on the first day of January, instead of the last day. All that the Manager can say is, that according to the measure of strength allotted to him, he will do his best to maintain the present satisfactory position of the Union. While no one can reasonably expect to *win* every suit, yet he will strive to have the defeats as few as possible—so far, there are none to record, of any finished case. What the future has in store for the Union, no one can now tell.

The apathy so far manifested by bee-keepers, is the only thing discouraging. There ought to be ten thousand members instead of only three hundred, more or less. The work done by the General Manager has taken much time, thought and energy—but it has been cheerfully *given* to this great cause, because no funds have been available to pay for the labor. Whenever there are funds in hand to pay for it, then he will insist upon being relieved—until then, he will do his best to defend the pursuit as required by the Constitution of the Union.

One in a Thousand.—The Union has about 300 members, and there are about 300,000 bee-keepers in North America—that is one in a thousand for the Union! The following from the *American Rural Home* shows the situation of affairs very forcibly:

> The annual report of the Manager of the Bee-Keepers' Union is again out, and shows that the Union is doing much good by the way of protecting bee-keepers from the jealous attacks of those who suppose that the "little busy bee" has nothing to do except to "eat young ducks and peaches."
>
> The report also shows that not a single case which the Union has defended has been lost, which is an almost unheard of precedent. This is largely due to the wisdom shown by the Manager, for he does not undertake to defend any suits where only personal spites or feelings are the motives, but only where the interests of the fraternity as a whole are at stake.
>
> Yet, however encouraging the above may appear, it is a singular fact, that only about 300 of our 300,000 bee-keepers of North America, have interest enough in the matter to pay the $1 fee demanded of them annually, to help carry on this good work of protecting our interest, and enlightening the public generally, regarding the important place our pursuit occupies among the agricultural interests of the world.
>
> The great purpose in the creation of the bee was the fertilization of flowers, so that all plants and trees whose flowers were not self-fertilizing, might become productive, and yet there are many persons, who have the bees only to thank for their bountiful harvests, who are so silly as to believe that they are only like "a roaring lion going about seeking whom they may devour."
>
> The Union is doing much to drive away this fog and superstition, and the bee-keeper who neglects or refuses to come to its aid by joining the same, is standing in his "own light," and showing a narrowness of mind not justifiable in any one.

◆

The Speed of Bees.—Quite frequently we hear of experiments being made, to endeavor to find out just how fast bees fly—as well as how far they go in search of nectar. All such experiments are interesting, and often not unprofitable, as they serve to awaken a greater interest in the "busy bee," aside from its honey-gathering ability. The testimony of an English engineer, regarding the speed of a bumble-bee, is given in the following paragraph:

> Some years ago, in England, I was out on an engine that we had rebuilt, during her trial trip. A bumble-bee took a fancy to investigate us, and after looking us all over on all sides, it began making a circle around the smoke-stack, varying from one foot to three feet from it. It seemed to do it with the greatest ease, for several minutes, and then left us, to find itself six or eight miles from where it joined us. We were going close on to sixty miles an hour. How fast was the bee going, when circling around the smoke-stack?

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Among the many who have been afflicted during the past month of general tribulation, we may mention our friend J. W. Sanders, of Le Grand, Iowa—his whole family having been quite severely afflicted—but all are now hoped to be out of danger.

The International Bee-Association should be a representative body. That was the intention of the committee when presenting the new Constitution and By-Laws. This we have advocated in the AMERICAN BEE JOURNAL at every opportunity, and we hope ere long to see all the advantages of a thoroughly organized representative body fully realized. We commend to the attention of all, the following very pertinent remarks of Mr. R. McKnight, of Owen Sound, Ont.:

> The history of the International, so far, shows that it is only such in name. A short time ago Canadian bee-keepers were almost ruled out, when its business matters came in question, and justly so, for Canada could only show two hands on a vote; but time works its changes, and to-day Canada takes the most prominent place on its membership roll—numbering four to one as against the States. Next year I suppose all this will be changed, and Illinois will "rule the roost."
>
> As long as this state of things go on, the International cannot be what it ought to be—the great representative body of the industry in North America—an industry that has made striking progress in recent years. It is useful in its way, as now constituted, but its present usefulness is nothing, as compared with what it ought to be, and what it might be.
>
> Its comparative lack of usefulness is not to be looked for in its Constitution, for this requires few if any amendments. There is in it all that is needed to make the Association a felt power in the land. Not until the Association becomes the recognized federal head of the bee-keeping commonwealth of America, will it have attained to the position it ought to occupy, and this can never be, until the State associations take advantage of the provisions of its Constitution, and become affiliated—send their delegates to its meetings, carrying with them the wants and the wishes of those they represent, and their suggestions respecting concerted action in matters affecting the general interests of the fraternity. There is a work the International can do, and a work it ought to do, that no sectional association can accomplish. It might as well never have been called into being, if it fails in becoming a representative body.
>
> R. McKNIGHT.

"Concert of action" and a "union of effort" will work *good* for the pursuit in general, and we commend the remarks of Mr. McKnight to all who are interested in the welfare of the International, and its destined work and ultimate accomplishments.

◆

New Catalogues and Price-Lists for 1890 are received from—

E. L. Pratt, Marlboro, Mass.—5 pages—Carniolan Queens.

W. E. Clark, Oriskany, N. Y.—26 pages—Bee-Keepers' Supplies.

W. J. Row, Greensburg, Pa.—12 pages—Queens, Bees, Hives, etc.

H. D. Davis & Co., Bradford, Vt.—40 pages—Hives and Supplies.

American Manufacturing Co., Buffalo, N. Y.—18 pages—Poultry Supplies.

John Nebel & Son, High Hill, Mo.—16 pages—Bees, and Bee-Keepers' Supples.

◆

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

GLEAMS OF NEWS.

The Southwestern Wisconsin Bee-Keepers' Association was organized on Jan. 15, 1890. Mr. Edwin Pike, of Boscobel, Wis., the President of the new association, has this to say about it, dated Jan. 23:

> I send the proceedings of our new bee-keepers organization. We have a goodly number to start with, and many more will join us. We hope to prove ourselves a credit and a help to the International, so that this industry shall be based on a foundation that will prove due recognizance with all other industries. Bee-keeping is now one of the pursuits that draws more attention here than almost anything else, from the fact that where five years ago there were only 3 or 4 bee-keepers, now there are more than twenty. Such a showing gives the industry stability. I intend to encourage the Bee-Keepers' Union with our members all I can. EDWIN PIKE.

The following is a condensed report of the proceedings referred to by Mr. Pike, taken from the Boscobel *Dial:*

> The bee-keepers organization was perfected on Jan. 15, 1890. Quite a number of our most prominent bee-keepers were present. The organization, the "Southwestern Bee-Keepers' Association," was perfected by electing the following officers for the ensuing year: President, Edwin Pike, of Boscobel; Secretary, Benj. E. Rice, of Boscobel; and Treasurer, H. Evins, of Wauzeka.
>
> It was decided that the association affiliate with with the International American Bee-Association, and that a delegate be sent to represent the new society, and that the expenses of the same be defrayed by the affiliating society.
>
> The dues were placed at $1.00 per year for each member, excepting ladies, who are to be admitted free.
>
> Among the topics discussed were these: "Different varieties of honey," "Bee-house ventilation," "Feeding bees in winter," and "Italian *vs.* black bees on red clover."
>
> It was decided that the next regular meeting of the association be held in Boscobel, on Thursday, May 1, 1890, beginning at 10:30 a.m.

The following letter, addressed to the President, Mr. Edwin Pike, explains itself:

> I am in receipt of your favor of Jan. 15, enclosing $5.00 for the affiliation fee of the Southwestern Wisconsin Bee-Keepers' Association, and I heartily congratulate you upon this step. If I am not mistaken, this is the first association, outside of the Ontario Bee-Keepers' Association, that has yet been affiliated with the International.
>
> I will remind you that this entitles you to the *ex-officio* vice-presidentship of the International, as president of an affiliated society. C. P. DADANT, *Sec.*

Silo and Silage, by Prof. A. J. Cook, of Agricultural College, Mich., is the title of a pamphlet of 44 pages, lately issued. It contains a plain statement of the method adopted and in successful operation at the College. The Professor says: "My silo has been a surprising success, and in this little *brochure* I shall tell in a plain, simple way, how I grow the corn, build my silo, fill and cover it, and feed the silage." Every farmer should read it. Price 25 cents. For sale at this office.

Premiums on Fair Exhibits.—The importance of moving early in the matter of securing proper recognition and offers of premiums on products of the apiary at fairs, is often overlooked by bee-keepers who usually, in other things connected with the pursuit, are really wide-awake. It is, no doubt, true that apiarists themselves are much to blame for not being better represented in the premium-lists prepared for the various fairs throughout the country, which are held every autumn. Mrs. L. Harrison, in her inimitably vigorous style, recently gave the following excellent suggestions in regard to the subject in the *Prairie Farmer:*

> Bee-keepers complain that fairs do not give our industry the encouragement that it demands. On the other hand, the officers of these associations retaliate by saying: "It's their own fault." This is no doubt true. We wait until the premium-lists are printed, or the fair is in session, and then set up a "howl." The time to do the "barking" is now; and "bark up the right tree," if we expect to catch "the coon." Make out a good premium-list, and send it to the Superintendent of Farm Products, together with a respectful letter, and request him to bring it before the Board at their meeting. Proceed in this way, and show that we are not ashamed of our calling, and demand justice at State, county or district fairs. If we do not "put up," we should "shut up."

Top-Bars, Hive-Entrances and "Colony."—Philo S. Dilworth, Bonney, Pa., writes thus on these subjects:

> I wish to unite in the popular clamor for increased thickness of top-bars of brood-frames. I desire them to be made at least ⅝ of an inch thick, on account of sagging. I have no doubt that increased thickness will help the burr-comb nuisance. I find burr-combs where the frames have sagged. The present width of the top-bars, ⅞-inch, suits me very well. I am satisfied to have the *width* of the top-bars increased beyond one inch. For the present, I prefer the width to remain ⅞ of an inch, but increase the thickness to ⅝ of an inch.
>
> The entrances of all chaff hives, or any other kind of hives should have the full width of the brood-chamber. I lost money last summer by using chaff hives with the "regulation" entrance, ⅜ by 8 inches. As soon as the colonies would get strong enough to go into the supers, they would fret about the entrance, and swarm. Colonies that have entrances the full width of the brood-chamber, worked in the supers.
>
> I want to protest against the word "colony" as applied to bees. A colony of people is a number of families in a settlement. A hive of bees is one family of bees in a small house, hive or box. The queen is a widow—the father is dead. True, there are a lot of old "bachelor" drones living in the same house, but still it is but one family. A number of these families, or hives, of bees in a yard or settlement, would be a colony, commonly called an "apiary." PHILO S. DILWORTH.

A "hive" is a box or house in which bees reside. The word "colony" is not quite to our liking, but it is preferable to "hive." Webster says a colony is "a company of people transplanted to a remote province." To colonize is "to remove and settle in a distant country." Webster's second definition of a *colony* is a "settlement"—that is, an off-shoot from the mother country. A "swarm" of bees, (that is, an off-shoot from the parent colony), seeks a new home; they locate in a *hive* or box, and may reasonably be called a *colony.* When they have gone to work in their new home, it is manifestly improper to call them a *swarm!* Their habitation is a *hive*, and it would be also very confusing to say that you "had *hived* a *hive* of bees in a new *hive!*" Either call them a "colony," or invent some more appropriate word—but don't call them a hive (*i. e.*, a box). If the bees abscond, how stupid it would be to say that the "*hives* flew away!" Just fancy the sight of *a lot* of boxes (hives) flying through the air, when there is no tornado.

Practical and Practicable.—Mr. Geo. F. Robbins, of Mechanicsburg, Ill., has this to say about these two words:

> I want to say something on the use of the two words at the head of this letter. I am sorry that I never found it convenient to jot down examples of their use, as I have noticed them in the different bee-papers. I find frequent cases of the misuse of the former word, and I thought that I could keep some of them in mind, but they have all slipped me. The error is in using the former word when the signification of the latter is evidently meant. *Practical* means pertaining to practice; capable of being turned to use or account, useful, evincing skill, etc. *Practicable* means, capable of being performed, possible to be accomplished, admitting of use, etc. These definitions are abridged from Webster.
>
> Now, I wrote to a certain paper that it was "practicable" to feed bees in winter. Just as I feared, "practicable" was changed to "practical." I meant that to feed bees in winter could be done—it was feasible. By the use of "practical," I am made to mean that it is useful, capable of being turned to account, or being made of benefit. Don't you see? If it is feasible for bees to take food from a certain feeder in winter, it is "practicable" to feed in that way; and a feeder that will answer that purpose, is a "practical" feeder, *i. e.*, it is good for that use.
>
> But not everything that is "practicable" is "practical." A scheme, work, method or device that it is possible to perform, is "practicable;" but it may be of so little use or profit as to be "impractical."
>
> We should look to our English friends, as well as any other class of writers, and remember that while "trifles make perfection," "perfection itself is no trifle."
>
> GEO. F. ROBBINS.

The "point" mentioned by Mr. Robbins, is very well taken, and is only one instance among many that might be noted. The words *except* and *accept*, *effect* and *affect*, are also illustrations of cases where care must be exercised when using them, else an entirely different meaning will be conveyed, from that which is really intended. Let all who presume to write for publication, select their words with some degree of thought; then when those who print the compositions thus painstakingly written, use the same amount of consideration, we may expect as nearly a perfect production as can be had in such matters.

QUERIES and REPLIES.

Inserting Capped Queen-Cells—Keeping Fertilized Queens.

Written for the American Bee Journal

Query 684.—1. How soon after removing a queen from a colony of bees, will it be safe to insert a capped queen-cell? 2. Can fertilized queens be kept safely a month or two (not in nuclei) in a room? 3. If so, how; and at what temperature should the room be kept?—Ohio.

1. Twenty-four hours. 2. No.—H. D. CUTTING.

1. I think that depends a little upon the season. 2. I do not know.—EUGENE SECOR.

1. I do not know. 2. They can probably be so kept—but why? It is more than likely that they would be quite worthless at the end of that time.—C. H. DIBBERN.

1. Everything depends upon the condition of the hive and the honey-flow. 2. It is not the way to keep them. 3. Try it, and then you will know.—JAMES HEDDON.

1. Twenty-four hours, where no cell-protectors are used; with the protectors, at once. 2. Not without injuring the future usefulness of the queen.—G. M. DOOLITTLE.

1. Much depends upon circumstances. I would not risk it in less time than 24 hours, and a queen-cell is never absolutely safe. 2. I think not.—M. MAHIN.

1. In about two days, with frequent exceptions. 2 and 3. Yes, in a well-protected queen-cage, in an even temperature of 60 to 70 degrees.—R. L. TAYLOR.

1. I find that I obtain the best success 48 hours after. 2. I have kept some over two months in a cage, having one dozen or so of bees with the queen. 3. Not under 60 degrees.—P. L. VIALLON.

1. When they find out that they are queenless—may be 24 hours, or so. 2. I think that they have been so kept. 3. Give them plenty of food and *water*. The temperature of ordinary living-rooms in summer will do.—C. C. MILLER.

1. At once. 2. Yes, if she is accompanied by a sufficient number of bees, and the room is of proper temperature. I keep them so for five months. 3. The room should be dark, and the temperature 45 to 50 degrees.—A. B. MASON.

If the bees have no eggs or larvæ to rear a queen from, you can insert a queen-cell immediately; but if otherwise, not until they have started queen-cells on their own account. 2. I have never tried it.—MRS. L. HARRISON.

1. No one can tell, as colonies differ so much in characteristics. 2. I do not think that they can. They ought to be kept in nuclei, to insure safety.—J. E. POND.

1. Put Doolittle's wire protector on the cell, and insert it before closing the hive. 2. Yes, but do not do it. Stop useless experiments that have already been gone over and over again, and get to work.—J. M. SHUCK.

1. During a good honey-flow, it is safe at any time. In the absence of a honey-flow, it is never safe. 2. If queens could be safely kept a month or two, in a room, I am sure that it would not be wise to do so.—G. L. TINKER.

From 12 to 24 hours. You could keep them in cages with a few escort bees, provided you can keep them in a temperature of from 85 to 90 degrees; but I am inclined to think that their fecundity might be somewhat impaired after such confinement.—J. M. HAMBAUGH.

1. Twenty-four hours—sometimes a little less. 2. We would hardly advise any one to try it; though we have known a queen with 10 or 12 bees to be kept near the stove, in a house, for about a month. They want a warm place. Feed thick sugar syrup in small quantity.—DADANT & SON.

1. Often, at once. 2. Twenty-four hours is enough. 3. Certainly, they are sent in the mails where they are *en route* for 40 days. They would certainly be better in quiet. 3. In a Benton cage, as sent from Europe. No special room or heat need be provided.—A. J. COOK.

1. By securely attaching the cell to a centre comb, and covering it with a cup-shaped wire-cloth cage, well imbedded into the comb, you can give the cell when you remove the queen. 2. With safety 10 to 15 days; but queens are injured by long confinement. 3. Seventy to 80 degrees—a low temperature might do for a short confinement.—J. P. H. BROWN.

1. Not less time than 24 hours; and if no risk is to be taken at all, not until the expiration of four days. 2. Yes, they can be kept for a month, or longer, but not "safely." I would not give much for a queen that had been confined in that way, in the laying season. 3. Cage the queen in a properly-provisioned cage, with about 15 workers to care for her. Change the queen to a newly-provisioned cage once in 10 or 14 days, giving her a fresh set of nursing-bees at each change. The temperature should range from 70 to 80 degrees. Queens might be kept in the winter months without injury in this way.—G. W. DEMAREE.

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Putting in Foundation to Get Well-Filled Sections.

Written for the American Bee Journal

Query 685.—How should foundation be used in sections, so that the bees will attach the comb to the sides and ends, and thus secure well-filled sections?—Maumee.

Fill the sections with foundation.—J. M. HAMBAUGH.

By using a full sheet of the foundation.—P. L. VIALLON.

Fill the section to within ⅛ of an inch of the bottom.—DADANT & SON.

Fill the section full, less ⅛ of an inch at the bottom.—G. M. DOOLITTLE.

Fill the sections full of foundation, and the bees will take care of the rest.—J. E. POND.

Do not cut the foundation too small. The strength of the colony and honey-flow has much to do with it.—H. D. CUTTING.

Fill the section so full of foundation that a bee can barely get around the edges between it and the inside of the section.—EUGENE SECOR.

Use full sheets, but the season has more to do with poorly-filled sections than any single cause.—MRS. L. HARRISON.

I prefer to use it just as large as possible, and not have it touch on the sides or bottom.—A. J. COOK.

Use it so large as to reach the sides of the sections within 1-16 of an inch, and within ¼ of an inch of the bottom.—R. L. TAYLOR.

Make it large enough to leave only ⅛ of an inch space at the sides, and even then bees may gnaw it away, unless somewhat crowded for room.—C. C. MILLER.

Full sheets should be used, but even then they will not be attached as desired, unless the flow of surplus honey demands it.—A. B. MASON.

I use only starters, and get the combs attached to the sides, but not always to the bottoms of the sections.—M. MAHIN.

I cut the pieces of foundation so that they will hang *closely* to the ends of the sections, and have no trouble with the bees not attaching the combs securely to the ends.—J. P. H. BROWN.

It is not a question how foundation should be fastened, nor how much of it should be used, in the matter of securing well-filled sections.—G. L. TINKER.

There is no way to do that practically, by manipulating the foundation. If you fill the sections full, you are liable to have bulged combs. If you do not fill them full, as you should not do, whether the sections are solidly filled or not will depend upon the season, and how you manipulate your bees and surplus receptacles.—JAMES HEDDON.

Echo, "how?" A V-shaped starter with the broad edge extending clear across the under side of the top of the section, a good strong colony of bees, and, more important than all else, a really good flow of nectar, will give nicely-filled sections every time, if the apiarist has properly adjusted the hives and fixtures.—G. W. DEMAREE.

The foundation should be cut the exact size of the sections; about ¼-inch will be used up to fasten it in, which will leave it *just right*. It will stretch enough to touch the bottom, and the bees will generally fill such sections so that it is hard to tell which was top or bottom, if other conditions are right.—C. H. DIBBERN.

If conditions are right, four different inversions will do it. If conditions are not right, nothing will do it. Open-sided sections have been prescribed for this trouble, but the prescription is not effective. First-class product rarely shows sections entirely full. To compel the filling of all the spaces is "puttering" in the hive, and is expensive as to time and honey.—J. M. SHUCK.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as any story. Price, $1.00.

An edition in strong paper covers is issued for premiums. It will be mailed as a present to any one who will send us *two* new subscribers to either the BEE JOURNAL or the ILLUSTRATED HOME JOURNAL.

CORRESPONDENCE.

BEE-ESCAPE.

Further Description and Explanation of the Dibbern Bee-Escape.

Written for the American Bee Journal
BY C. H. DIBBERN.

The illustration of my bee-escape, on page 798 of the BEE JOURNAL for 1889, was no great success—except as a puzzle !

Well, the result is, that I am flooded with letters, and postal cards, asking for explanations, etc. It can easily be understood, that I cannot answer all these inquiries by personal letters, and by means of the illustration here shown, I trust that I can make the matter a little plainer.

During the present summer-like weather, I have been testing the escapes in various ways, as I wish to have them so perfect that they will not soon be improved. I have been making some improvements myself, however, since writing my former article.

The illustration represents four of the principal figures that suggest themselves, into which the escape can be formed. No. 1, is a single exit escape, and is the surest of all, as it is almost impossible for any bees to get back through the escapes. It is calculated to use two of these on a board.

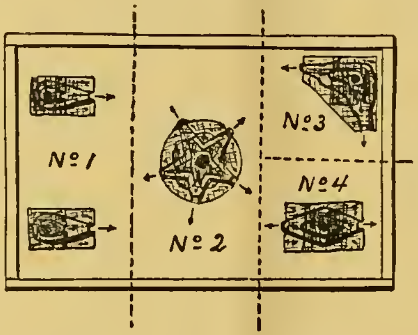
No. 2 is star shape, for a center escape, with exits at the points. I now prefer only four points to the star, as it gives better space around the inside escape, and four exits are plenty. I think that this four-point star shape will be the favorite pattern. I have lately improved this by cutting out a 4-inch hole, with an expansive bit, and fastening the escape to another round piece cut ¼-inch smaller all around, and a piece of tin nailed on top. This allows the escape to be pulled out at the top, and a solid piece can be inserted without removing the board at all.

Care must be used, if the escapes are tacked on the board in the bee-space, to see that bees are out of the way before laying the board down, so that they will not be crushed. By cutting a 4-inch hole, I place the escape so that it occupies the space cut out from the board with exits in the ¼-inch space, that the escapes are smaller than the hole.

The escapes can be used just as well, however, in the bee-space under the board ; a puff or two of smoke through the hole will drive the bees out of the way, and the escape can then be slipped into place. I like this plan the best of all, as it disturbs the bees less than if the board has to be taken off.

No. 3 and No. 4 are only different forms of the same thing, which I now think will not become very popular. It will be noticed that the principle is the same in all—a double escape with a liberal bee-space between the inner and outer figure. This space should be wide enough to allow bees to pass, otherwise they sometimes crowd from opposite directions, and bees become wedged in. I consider this bee-space between the inner and outer cones or figures, of great importance, as it breaks the communications between the bees and the main hive, and those in the super to be removed.

I believe that the escape-boards, which I make only ¼-inch thick, will be found very useful as an inner cover to supers, and as a comb-honey protector, with one or two ⅜-inch holes open, to allow some bees to remain with the honey, to care for and ripen it, till the end of the white honey harvest. I now make the claim that I am the first person to suggest such a board for this purpose.



Forms of the Dibbern Bee-Escape.

In moving or shipping bees, these escape-boards, with a 4-inch hole cut out, will be very handy to put on the main hive, with wire-cloth tacked over the hole. I expect to make up 200 hives this winter, and they will all be provided with these boards. By using these, I will do away with rubber covers, which I have found objectionable on account of retaining too much moisture.

During one of our numerous warm days lately, I exposed a super of partly-filled sections in the apiary, and it was not long until the bees were fairly swarming on it. I then quickly placed an escape-board over it, with the escapes up. It was a sight to see the bees pouring through the escapes and out. Some few would try to turn back, but they almost invariably made the circuit around the inner escape, and then out. The robbing bees clustered on the escapes in great bunches, but seldom did a bee find its way back through the 2nd escape. In about an hour after putting the escape boards on, all efforts at robbing had ceased, and the super was entirely free from bees, although still containing plenty of honey.

I have also been giving supers of sections from which the honey had been extracted, to bees to be cleaned up. I find I can get rid of the bees, whether the honey has all been carried down or not, in about an hour, by placing the escape under it. One super I had forgotten on a hive for a few days, and the colony seemed to have occupied the empty comb in the super, so I placed the escape-board under it in the evening, and the next morning it was clear of bees.

I am sure that when the real value of this bee-escape is once known, it will be found as necessary as a good smoker. I imagine there will be much less shaking the bees off the combs, or brushing them off, in extracting honey in the future than in the past. Then, how pleasant it is to go to the hives, slip the escapes under supers in the evening, and the next morning carry the honey in, and the bees never know what has happened.

Milan, Ills.

BEE-KEEPING

Considered in Connection with Other Pursuits.

Written for the American Bee Journal
BY CHRISTIAN WECKESSER.

Much may with propriety be said on both sides of the question, as to whether it is best to combine bee-keeping with other pursuits; but circumstances will ever alter cases to such an extent that no definite rule may be given. Successive unprofitable seasons have convinced many that it is not wise to depend upon bee-keeping alone, and many have such a liking for the business that they would not abandon it even for something more profitable. A practical question is, what and *how* to combine it with other pursuits in a satisfactory manner. Individual taste and inclination will, at least measurably, determine *what* to combine with bee-keeping, as well as the pursuit one is pregaged in on starting out.

To my mind the *manner* of combining bee-keeping with other pursuits is an important consideration. I endeavor to make the most of bee-keeping with the least labor, and it seems best to give my time to matters that will more invariably give profitable returns, and I thus make bee-keeping a sort of "side business," and endeavor to still be prepared to "take in" a good season when it comes.

To reduce the labor and expense of poor seasons, I am getting the bees into out-apiaries of about 25 colonies, in which way they, even in a poor season, get enough to winter, and do not need much attention, unless they *do* get something; and even then, one need not worry, if the arrangements are good. But having them good, is somewhat of a task, which I have not been able to meet as perfectly and satisfactorily as I like.

Of course, I should not even attempt to produce comb honey, which would require constant care for swarming, etc.; and for producing extracted honey, one needs a large hive, capable of tiering up, and to have the queens' wings clipped, unless some one is about, to attend to swarming.

If the honey-flow is light, I find that they need little attention until the season is over, when the surplus may be removed, and the bees prepared for winter; but if the flow is heavy, they should be looked after, and empty cells provided near the brood; and it may be necessary, or desirable, to make one or more extractings before the close of the season. To many, perhaps, like myself, the item of little labor when there is little profit, and to have other profitable occupation meanwhile, is a desirable feature, and when there is much extra labor during a heavy flow, we can readily manage to get help.

Marshallville, Ohio.

BEE-CULTURE.

The Sunshine and Shadow of Apiculture.

Read at the Ontario Convention

BY ALLEN PRINGLE.

Nearly every occupation (and want of occupation) under the sun has its sunshine and its shadow, its ups and its downs. From the king to the beggar, and from the millionaire to the tramp, with not a meal of victuals ahead of him, there is the cloud alternating with the sun.

And certain it is that the preponderance of cloud in the drama of life is not always with the beggar or the tramp. "Uneasy," it is said, "is the head that wears a crown" (the head that wears a sting for half a minute is also uneasy for a time); and the "Divinity that doth hedge a king" sometimes fails to hedge, and his regal tenure, as in the case of the present Dom Pedro, is painfully uncertain—sometimes as precarious and uncertain as the beggar's next meal.

But without further homily, we may as well admit at once that the apiarist—even the apiarist—has clouds mixed with his sun, and sometimes mixed with a vengeance. Just how much sunshine or shadow there may be in any particular case, depends much upon the particular individual himself or herself. Some people—left-handed people, as it were—are always in a cloud, or hot water, no matter what business they are in, or out of. They manage to raise a cloud of dust about their own eyes and ears, and although "Old Sol" may be smiling on them from above, they see none of him; and the music of the spheres never reaches their ears. These are the pessimists. Others, again, see all the sunshine within their visual or mental range, and hear all the music that Nature or Fate vouchsafes.

The bee-keeper may, however, among all others, be justly described as "Dot happy bee-man," of whom our American cousins, Secor and Miller, have so eloquently sung. The old saying, that it is better to laugh than cry over the misfortunes of life (even though the misfortune be a pointed one), is on the whole, good—very good advice—so long as the laugh carries with it the wholesome lesson of experience to avoid a repetition of the misfortune. Of course, every bee-keeper who is a philosopher as well, will bear the pointed and barbed misfortune as best he can, and try to ward it off next time.

Now, taking the bee-keepers, who are bee-keepers, all in all together, I think they have more sun than cloud in their pursuit of honey. Possibly this may be an optimistic view, and the writer may be looking through the clouds into the sun with luminous glasses. Be this as it may, he takes pleasure and pride in saying that his own apicultural horizon has been encouragingly free from clouds. In other words, he not only derives a high order of mental pleasure and profit from the pursuit, but makes it pay in dollars and cents from year to year. You may perhaps put this and that together, and draw a conclusion not flattering to the speaker's modesty—this, viz: that he has not had much cloud; and that, viz: that the amount of cloud depends mostly upon the man himself. The conclusion is apparently logical enough, but does not necessarily follow from the premises. The matter may be explained concisely in one sentence, to-wit: He always did love the honey-bee, and bee-stings never did hurt him, to speak of. Whatever the cause—whether of nature or grace—this deponent is as nearly sting-proof as any one need desire, and be reasonable. I can imagine our worthy President Clarke, or our venerable absent friend, Father Langstroth, or our versatile cousin, James Heddon, whose nerves and blood are, I believe, so painfully responsive to the barbed dart, exclaiming: "This, indeed, is the cloud of bee-keeping with us, beyond even an adverse balance sheet." I cannot sympathize with such from experience, but I sincerely extend to them my theoretical sympathy, should that be worth anything.

I tell you, gentlemen (and ladies), that I have learned, not of myself, but from others—that by far the biggest cloud above the horizon of bee-keeping comes directly from the business-end of a business-bee; and the fortunate bee-keeper who has a "coat of mail" invulnerable to that lance (not outside of him, but inside of him), has a tremendous advantage in the race over his less fortunate brethren. The bee-keeper, therefore, who can receive that "business-end" referred to above, without flinching, and even with equanimity, and can steer clear of most of the other evils and obstacles of the business, and take the inevitable balance of ills like a philosopher, is to be congratulated, or is a fit subject for a certain amount of envy, as the case may be. On the other hand, those of us whose nerves and blood rebel against a sting, and who are not able to avert the clouds of winter losses, spring dwindling, foul brood, and others of less sombre hue, deserve not only our sympathy, but our assistance, and I purpose now to give my mite of assistance in the shape of a little advice, after I have briefly enumerated the sunny and cloudy points of bee-keeping.

The sky of the apicultural novice is, as a rule, remarkably clear, in prospect at least, but when he gets down to business the clouds soon begin to gather.

On a fine morning in spring, he gets his first "skep" of bees, and carefully places them in the front yard on a bench under the plum-tree. Soon he sees them sally forth in the sunshine, and return laden with little golden pellets on their legs, which he joyfully regards as the "stuff they make the honey of." Visions of increase of "skeps" of honey for his table, and honey for the market to replenish his purse, come up before him, and he is happy.

In due time his "skep" swarms, and he hives the new recruit successfully. They go to work. To make a proud beginning in manipulation, he now puffs with his smoker, opens the hive and lifts an outside frame of honey from the old colony or parent skep, wings off the young bees according to the book, and goes to the house triumphantly with his prize, and makes a magnificent, mellifluous spread for dinner. He is now, to all intents and purposes, "Dot happy bee-man," with not a cloud in his sky. The new swarm and the old colony go on industriously and improve "each shining hour," and everything is lovely with the incipient apiarist.

But the whirligig of time brings its changes and its revenges. The new colony has filled up and become strong and ready to swarm. The old skep, too, in the midst of abundance, has hustled up to the swarming-point again, and both take advantage of the sun after a cloud, and issue together. They mingle in the air in fraternal greeting, and cluster together in the top of the plum-tree.

Our amateur bee-keeper is now in a "swither" what to do, and quite loses his head. He gets out the table, however, sets it under the tree, and spreads a white sheet over it as carefully as that over the corpse at "Tim Finnigan's wake," and soon to be followed by a similar "ruction." Then after washing out the new hive with salt and water, and swiping it with a tansy stalk, he stands himself upon the table, holds the hive up with his one hand, and with the other hand shakes the bees down. But they miss the hive and fall on his head, and down his neck and shirt-sleeves, where the close quarters and the odor of sweat put them in fighting trim *instanter*.

Horror of horrors! He drops the hive and leaps from the table in pain with a cloud of bees about his head. With the exception of this fighting detachment, the two swarms rise in the air and make a bee-line for the woods, with our now thoroughly demoralized neophyte in limping pursuit to the best of his ability, over fields and fences, through dykes and ditches, until he loses sight of the fugitives and sinks exhausted, his eye-sight by this time being none of the best, peeping out from a head dazed, and of most extraordinary proportions. He rests a little and writhes a great deal, and then slowly gropes his way back. This is his first cloud, and a big one it is—in fact it is the "blackness of darkness" to him, for now he can see neither sun nor cloud, nor anything else. We now gently leave this brother in distress where he is, with our kindest sympathies—all we can offer.

Now, the sunshine of bee-keeping, to put it briefly, is this: First, to be able to take a sting without minding it; second, to winter and spring the bees without loss; third, to steer clear of foul brood; and finally, to get a crop of honey each year and sell it at a good price, and the surplus bees ditto. This is what may be properly called sunny and successful bee-keeping, and is the grand goal of apicultural ambition, but few there be that find it.

Per contra, the clouds of bee-keeping, summarized are: First, a sting that poisons and pains; second, a winter mortality and spring dwindling that thins the yard; third, foul brood, mice in winter, and toads in summer, ants, wasps, spiders, beetles, the king-bee, the bee-hawk, the bee-louse, robber-flies, etc.; and finally poor crops of honey and unremunerative prices. These are the clouds, though fortunately they seldom bunch up together over the luckless head of any one luckless bee-keeper.

In conclusion I may be permitted, in as brief a manner as possible, to give some advice (only, however, to those who need it, and most of you probably do not) as to how to avert the biggest of the clouds and invite the sunshine.

First, as to stings: In handling bees, the prime requisite is to be brave and quiet, to keep cool and handle carefully. Almost equally important is it to keep yourself scrupulously clean in person and apparel, for the bee is fastidious, and ever ready to resent malodorous offences. Then when so unfortunate as to get stung, rub the stinger out at once by a single, smooth motion of the finger over the part stung, and turn the part aside from the bees for a moment till the effluvia, which accompanies a sting, and which invites further attack—is dissipated.

To attempt to avoid the losses of winter mortality and spring dwindling is a big undertaking involving an extensive knowledge of apicultural science and art as well as an extended experience. We all have considerable yet to learn on this subject. The best knowledge I have at present on the subject may be stated in its main points briefly as fallows:

Give every colony plenty of stores for winter (honey is best), early in the fall (September), so that they may settle down contentedly instead of wearing themselves out looking for winter food. Keep them dry and warm. Put them in winter quarters early, before cold weather. Leave the lids off. Replace the summer quilts by clean cotton ones, and cover over with woolen quilts or cotton filled in with wool. Keep the repository at about 45 to 50 degrees. Be in no hurry in getting them out in the spring unless they are diseased or restless. When out, clean them, give them plenty of food, crowd them up, pack them up warm and dry, and leave them alone through the spring only when necessary to attend to them. The winter and spring management, of which this is an outline, I have found successful.

To avoid the origination of foul brood, or less formidable diseases in your own yard, attend to sanitation. Keep the yard and hives clean, and never uncap or behead drones in a weak colony where they are liable to rot instead of being carried out.

The king-bird eats queens and drones; use powder and shot on him. Against the miller-moth there are two remedies, viz: Italian bees, and strong colonies of any kind.

To avoid the worry of swarming-time, and the break-neck chasing of absconding swarms, keep your queens' wings clipped; and keep back all after-swarms, as they are unprofitable as well as troublesome.

How to get a good honey crop when it is going, and avoid the cloud of a bad one, would take hours to set forth. I can, therefore, only say here, read the bee-papers and the standard works on the subject; learn and profit by your own experience; and then rely upon yourself by using your own best skill and judgment.

To get a good price for your product after you have got it, certain conditions, besides the market, are essential. First, see that you get it out of,or off,the hives ripe and in good order, and then preserve it in good order—the comb honey in a warm, dry place, and the extracted, when ripe, in a dry, cool place. Keep it clean and neat, and put it up with care and taste to suit your customers. Label and guarantee your product over your own name, giving brief and clear directions how to preserve properly, and how to liquify. Then wait till the market opens, and a demand arises, instead of rushing your crop out prematurely, and taking catch prices. Of course, in the case of regular customers, grocers or others—they must be supplied whenever they want it, provided the honey is ripe and fit for market.

I hope that your apicultural sky may be always fairly free from clouds, and that the season of 1890 may be successful with you all.

Selby, Ont.

MARKETING.

Italian and Carniolan Bees—The Past Season.

Written for the American Bee Journal

BY N. STAININGER.

Bee-keeping in Iowa last year was a success—at least it was in Cedar county. All the small towns were flooded with honey from farmers, and they sold it at any price, as low as 7 to 8 cents for comb honey. Now if any bee-keeper can sell honey in any other town where they have cut prices in this way, at any better prices, and sell any amount, then he can do better than I can.

I shipped the greater part of my honey to New York—8,000 pounds of comb honey, and 8,300 pounds of extracted—which brought, in New York City, $1,608.09. The total expense was $267, which left me $1,341 net. If it were not for the outrageous freight charges on honey, the expenses would have been very reasonable; but I think that bee-keepers might get better rates, if they would stick for their rights—$1.21½ per 100 pounds for freight is entirely too much.

THE PROSPECTS FOR 1890.

I think that the prospects for a good honey season this year are favorable. All kinds of clover and fruit look good, and the bees seem to be comparatively in good condition; almost all of them have plenty of stores, and I have several thousand pounds stored away in combs for them in the spring.

My whole crop last year was about 25,000 pounds, all told, from 140 colonies in the spring—making an average of about 178½ pounds each—half comb and half extracted. I increased my apiary to 235 colonies.

ITALIAN RACE OF BEES.

The Italians are the bees for me. They store the most honey, are the easiest to handle, and give the least trouble in swarming. My best colony for comb honey swarmed on June 7, and stored 160 pounds of comb honey, and had three frames of brood and honey taken out, besides.

My best colony run for extracted honey, gave me 425 pounds, with plenty to carry them through until next spring.

About the middle of June there came a very large swarm of black bees to me, and I hived them just the same as the others, and they stored about 75 pounds, with about enough to last them until spring.

THE CARNIOLAN BEES.

These bees have not been satisfactory with me. Two years ago I bought a tested queen for $4.00, and put her in one of my best colonies, and in less than three weeks they swarmed. Well, I saved all the young queens, and I got eight or nine nice ones, but, lo and behold, when the young bees were old enough to work, they wanted to clean the ranch; they were as cross as any hybrids.

I wrote to the breeder, and returned the old queen, and he sent me four young ones; but they were no better—three of them I killed last summer; when they swarmed, I hived them five or six times, and sometimes twice a day, until I became disgusted and killed them. I do not think that any of them were pure, and they were no comparison to the Italians in honey-gathering; their best quality, that I have found, is wintering. They cannot be excelled for quietness.

Tipton, Iowa.

HONEY-PLANTS.

The Nectar-Producing Plants—Their Peculiarities.

Written for the American Bee Journal

BY G. W. DEMAREE.

In my study of nectar-bearing plants and trees, I have met with peculiarities both interesting and instructive. A marked and most befitting peculiarity in that class of nectar-producing plants upon which domestic animals chiefly feed, is found in the fact that they only secrete nectar after the sun begins to warm the earth, and the domestic animals instinctively begin to retire to the shady places for protection against heat and the annoyance from flies. Chief among this class of bee-forage are the clovers. Many plants that are not browsed by cattle—catnip, milkweed, figwort, hyssop, iron-weed, etc.—produce nectar at any time, governed by no fixed rule.

Again, we have other plants—buckwheat, smart-weed, spider-plant, dandelion, etc.—that produce nectar only in the early part of the day. Another class of plants are peculiar because they are at their best in the heat of the day; among these I mention hoarhound, mullein, iron-weed, motherwort, milk-weed, etc.

Finally, we have a class of nectar-secreting plants that are at their best only in cool weather. These are the asters, golden-rods, boneset, etc.

But it will interest many readers to speak more particularly, before dismissing this subject. Years of constant inquiry and research would not enable any one student to compile a complete list of all the nectar-secreting plants. That practical, untiring bee-keeper, Dr. E. Drane, of Eminence, Ky., once remarked to the writer that he once thought that nectar-secreting plants were somewhat limited, but since seeing his bees busily at work on the despised cocklebur, and the pesky purslain, he declined to fix any limit. Every close observer must feel somewhat in this way. No blooming plant is wholly discarded by the bees, unless we except the loud-smelling dog-fennel—and I have, in my long experience, had the pleasure of seeing *two bees* interviewing the dog-fennel!

When summing up the matter, the plain, unpretentious little white clover must be crowned king of all the honey-plants on the American continent—not because it produces nectar more profusely than any other plant or tree (for perhaps this is not the case), but its vitality and power to propagate itself, overcoming all opposition, and growing better by reason of close grazing by stock, and making itself at home on a wider and more extended portion of the American soil, than any other individual nectar-bearing plant—it is king of American honey-plants.

Alsike clover is a more profuse nectar-bearer than any other variety of the clovers, but it lacks vitality. It is short-lived, and fails to propagate itself in this part of the earth.

The common red clover is a great nectar-bearer, but its habit of growth is too coarse and luxurious for the utilization of the honey-bee. Nature seems to have assigned this large variety, in a measure, to the large species of nectarious insects.

Whatever may have been said as to the great number of nectar-bearing plants, it is surprising how few are capable of yielding stores in abundance. In my own locality, if there were no white clover, I could, perhaps, take honey in paying quantity by sowing Alsike clover every season; but neglecting this, my bees would not be able to board themselves, without giving one pound of surplus.

Facts gleaned from all over this country, will show that fruit-bloom yields but scantily for breeding purposes, and that the fall-flowering plants fail to furnish winter stores, except in favored places.

Linden timber grows in nearly every State in the Union, but it is found in sufficient quantity to produce surplus honey in comparatively few places. The great bulk of our surplus honey comes from white clover—the king of honey-plants.

The "golden-rod"—because of its romantic name, and because it is appropriated by beautiful women as an adornment—may well be named as the "national flower;" but it is a dead failure in this part of the earth, as a nectar-bearing plant.

Christiansburg, Ky.

COLORADO.

The Report of the Colorado State Convention.

The Colorado State Bee-Keepers' Association met in annual session at the Denver Chamber of Commerce, on Jan. 20, 1890, at 10 a.m., with President Milleson in the chair.

The minutes of the previous meeting were read and approved, after which Secretary J. M. Clark read his annual report as follows:

The year just closed has been a year of progress for Colorado. Her population has received large accessions from immigration. Capital has flowed into the State, a fair share of which has found employment in the development of our material resources. The apiarian interest has felt the impetus which has carried forward all our industries to a fuller development. The very bees themselves seem to have caught the spirit of the times, and have done their "level best" to colonize the State. The percentage of increase for 1888 was 56; for 1889, so far as reports have come in, the rate of increase has been 93 per cent.

In 1888, 188 bee-keepers reported 155,000 pounds of honey; thus far for 1889, 104 bee-keepers have reported 124,706 pounds. From reports thus far received, a rough estimate would place the total product of the State at over 250,000 pounds. To this bright side there is a darker shade when we come to consider the possible danger that threatens our busy little workers. The ravages of foul brood in some apiaries has blighted the hopes, and brought serious loss to some of our number, and to them we extend our warmest sympathy.

During the year 1889, and since our last annual meeting, the association met three times; viz: on March 20, Sept. 11, and Nov. 20. These meetings have all been fairly well attended, and very interesting.

Through the efforts of this association, a law was passed by the last Legislature, which, if properly enforced, will doubtless be the means of saving to the productive industries of the State, thousands of dollars.

The sneering remark in an alleged agricultural paper, that foul brood had disappeared, and there only remained the commissioner, was evidently but an effervescence of pardonable ignorance. The author should plead the "baby act," and receive the parental forgiveness of our organization.

The expenses of the association have been unusually heavy, owing to the fact that we have published the Constitution and By-Laws of the association, also the law for the eradication of foul brood. The expenses of the collection of honey statistics, was also considerable, mostly in postage. Our report, therefore, shows the association to be in debt, but we trust that the receipts at this meeting will more than cancel the indebtedness.

The total receipts so far are $56.83; disbursements, $56.23; bills due, $16.25; total amount of indebtedness, $15.65.

J. M. CLARK, *Sec.*

Following the Secretary's report, the report of the Treasurer, Mrs. R. H. Rhodes, was read.

After some discussion in regard to paying the cost of Inspectors' commissions, it was voted that each Inspector pay the cost of his own appointment and commission.

Interesting essays were read and discussed.

W. L. Porter, of Greeley, had "Extracted Honey" for his subject. By the way, this was the essay that received the "third prize" offered by the AMERICAN BEE JOURNAL. Score one for Colorado, as being able to take third out of eighteen essays from all over the United States.

Following this, D. R. Emery, of Longmont, read an essay on "Bee-farming on a five-acre lot, with fruit and poultry." Many points were commended, and affirmed by Mr. and Mrs. Booth, as to the quality of honey and honey-plants, and weather fit for bees to work in. Mr. Booth thought that Colorado could "brag and blow," but we could not "hold a candle" to California in that line. While there are many good things there, so much of it is over-estimated and over-stated abroad that it must be received with a great margin. The deserts, the fog, the chill, and the cost, and the bad generally, is never over-stated abroad.

H. Knight read an essay on "Bee-Houses." He thinks that they are just the thing for safety, comfort and convenience for the bees and their keeper, both in summer and winter. He has now five houses; and used them six years. A cheap board-house, 8x16 feet, with 6-foot walls, will hold about 40 colonies.

An essay was read by V. DeVinney, on the "Duties of Members of the State Bee-Keepers' Association." After remarks by several as to the duties of members to encourage apiculture and concentration of power by State and local clubs and personal work, and attendance at all bee-meetings, the convention adjourned for dinner.

THE AFTERNOON SESSION.

At 1 p.m. President Milleson called the convention to order, which then listened to

The President's Address:

The intellectual activity that is being aroused in every department of production on the farm should stir us to a more energetic perseverance and untiring, persistent determination to overcome every obstacle that the bee-keepers of the great State of Colorado may have to contend with. When we seek for information as to the success or failure of bee-keeping in the great Northwest, on every hand, and on the Pacific slope, we find indications that the great honey resource of California has reached its highest possible figure, and if the arguments of the California apiarists be true, California will never again contest with Colorado for the supremacy as a honey-producing State.

Of course, it may seem strange to some that have not studied much on this particular subject, that we venture to take such high ground, but how can we live in and breathe the pure air of our great and fast-growing State, and not feel the quickening of the pulse of push and enterprise in every department of labor? When I look back six years, and see the rapid strides the bee-keepers have made in that short time it is putting it mildly to say that I am satisfied and proud of the result. Notwithstanding the grip the foul brood has made on some of our heretofore best apiaries, we see the bee-keepers increasing in number on every hand, all over the State, and with grand results.

Many people look upon bee-keeping as a side issue, expecting to produce only sufficient honey for their own tables, whereas the facts are that if the farmer would give more time to the bees at the proper time, the return would be greater in money value than either the dairy or the poultry yards. Some bee-keepers (a very few) have become a little discouraged on account of foul brood, and "off years," as we term it. when the little toilers fail to give us a grand crop of surplus nectar; but do we carefully take into consideration how often the poultry-yard fails to show satisfactory figures; or the potato crop turns out a partial or a complete failure; or the number of bushels of grain falls below an average crop; or when the price of beef falls so very low that the stock-grower becomes (as well he may) very much discouraged, and finds himself engaged in the very unsatisfactory pastime, figuratively at least, kicking himself around his corral for not having sold his stock when he could have done so at a good profit?

Very few people are aware of the magnitude of the bee-keepers' occupation. There are, according to estimates, about 300,000 bee-keepers in the United States and Canada, and if every bee-keeper has 15 "colonies," it would swell the grand total to 4,500,000; and an average surplus put at the low estimate of 30 pounds to the "colony," would give an amount of 135,000,000 pounds of surplus in one year, which, at 10 cents per pound, would bring $13,500,000. We might reasonably add to that already large amount one pound of wax to each "mother colony" at 15 cents per pound, which would give us the net sum of $675,000. Thus we find our department of industry would give employment to a very great number of workmen in the manufacture of hives, honey-crates, and all kinds of material for carrying on an industry. But enough of this.

Allow me to thank you for the uniform kindness and forbearance on your part to me. While I am well aware of my inability to preside over this association, as well as many of you are, yet I must say that it has been a source of pleasure to me, having had your uniform and hearty assistance, and in taking leave of you at the end of the second term as your presiding officer, I can assure you that whatever relation I may sustain in the future to this association, I will always cherish with pleasure our relations in the past, and stand ready to help in every way that I can, hoping that you will look to our neighboring counties for the officers for the coming year. It would be a pleasure to me to have an excuse to go away from home to attend the next annual meeting of the Colorado State Bee-Keepers' Association—either north, south or west. Bear in mind, please, I hope you will divide the honors as well as the labor with our neigbors in the other counties. E. MILLESON.

The following officers were elected for the ensuing year:

President, E. Milleson; Vice-President, W. L. Porter; County Vice-Presidents: H. Knight, Arrapahoe; W. Emery, Boulder; Mr. Beal, Weld; L. Brock, Jefferson; O. F. Blair, Las Animas; N. C. Alford, Larimer; A. Cushman, Montrose; member of Executive Committee, Mrs. L. Booth.

R. H. Rhodes read an essay on "Foul Brood." It is a fatal disease, that all must help to keep out or eradicate. The law on the subject should be well distributed by bee-keepers, and published by all papers. Immediate cremation of badly affected comb and hives is a heroic medicine.

J. M. Clark's extempore "essay" on "The honey market," was full of good points and hints for the interest of all. It is best to have a general agent or a house to buy all your surplus honey at a fair price, so that the home supply can be under control, and be able to compete with outside competition. For industrial producers to go on the street and peddle their honey at any and all prices, will work harm to them and the whole fraternity, and help to flood the State with all sorts of inferior honey from abroad. Put good, clean honey in neat, attractive packages. Two-tier 24-pound, square crates are best. Sell by net weight; no pay for crates, only in better price for the honey.

Colorado honey is at the head of the class for quality. Mr. Davis exhibited three crates in the East, and all acknowledged it superior. The demand is good, and the supply is getting short. Extracted honey is also in demand. All producers should belong to a joint-stock commission house, as with their sympathy and a good bank account, you can do a better business.

Out of 400 bee-keepers, 125 have reported 125,000 pounds of honey. Let all apiarists look, and work, for the general and continuous interest and State market, and not let a few paltry cents and temporary selfish motives injure the general market and fraternity of bee-keepers.

Before adjourning, it was decided to have a two days' session next year.—*Colorado Farmer.*

FOUL BROOD.

Are there Two Distinct Kinds of the Disease?

Written for the American Bee Journal

BY WM. S. BARCLAY.

In my early efforts in bee-keeping (37 years ago), if I could except my perplexity in wintering bees, my next difficulty was to overcome the ravages of the moth; this, to our present enterprising bee-keepers, may seem a wonder; but should they reflect, they will remember that it was in the days of the black or German bee. Now, as the Italian bee has become the principal factor in our efficient work in the apiary, I look upon it as the solvent of all our troubles, and, as far as my observations on this point are concerned, it is a most complete one (I here refer to the bee-moth).

Setting aside our wintering difficulties, which I as yet regard as in a world of doubt, I proceed to make inquiry into another matter, which I conceive is well worthy the attention of every bee-keeper, and, I fear I may well say, of every bee-master.

In a word, that insidious disease—foul brood—demands our most careful attention; let it appear in what form it may. From the first description of its ravages upon apiaries, which we learn in the earlier volumes of the valuable AMERICAN BEE JOURNAL (and this was in the apiaries of foreign countries), I have had my fears that the plague would be introduced among us; and now that it has become a fixed fact that many of our bee-keeping friends are suffering from its disastrous ravages, is apparent to us from complaints being made in our various bee-papers. Let us inquire whether from descriptions of various cases of this malady, we may not be deceived as to its true character.

As an example, I will relate a circumstance which occurred in my apiary in 1886, and which was a greater mystery to me than anything which had heretofore occurred in my management of bees. At that time, I had a strong colony which commenced gradually to decline in the middle of the honey season (I have kept a record of this, and my observations from day to day); the queen was in her second year, and continued to lay pretty freely every day; the bees appeared healthy, although they worked sluggishly. I could not detect the least offensive smell, and yet scarcely any brood was hatched. During all this time, I was fearful of foul brood, but as we had been taught by those who described it, that it could only be detected by its offensive smell, I was led to believe that after all I was mistaken and my colony was afflicted by some other serious trouble; and not until I met an article in the AMERICAN BEE JOURNAL, copied from the London *Journal of Horticulture* (See AMERICAN BEE JOURNAL for 1887, page 730), did I find any solution to the mysterious problem.

From a recollection of my experiments and reference to my notes, I was then satisfied that my colony had been severely attacked with odorless foul brood, so accurately described in the article referred to.

Now, the point that I wish to make, and the danger I have spoken of is, that while we are anxiously watching to observe foul brood from the offensive smell which is said to always indicate its presence, our bees may be battling against odorless foul brood, which gives forth no scent by which it may be detected.

Would it not be well that our instructors should designate whether their treatment is applicable to malignant or odorless foul brood? because I am fully satisfied that both classes of this malady are among us, and that the treatment of the one is not at all that which is necessary to the other. I have never met a case of malignant foul brood, neither do I wish to meet one, but in the season of 1888 I was called to the apiary of a friend who had a case of odorless foul brood precisely similar to the one that I had to encounter in 1886, and which I treated for him.

A similar case occurred in my own apiary about a month afterwards, upon which I operated after the plan given by Mr. Muth, adding some other chemicals, and I found no difficulty in overcoming the disease. So satisfied was I of my success in this, that I used some of the combs from this colony in others, and at no time was there any re-appearance of the disease, and in the season of 1888, I not only used some of the combs, but also the hive of the affected colony—and all without any bad results; neither have I since seen the least evidence of its return, either to my own apiary, or to that of my friend.

I must, however, not neglect to state that I had thoroughly fumigated the combs, scrubbed the hive, and permitted both to remain on their stand to become more thoroughly purified by the frosts of the greater part of the winter.

From my impressions of malignant foul brood, I feel convinced that I could not have succeeded so well, and further believe that the same form of treatment given successfully to the one, will in no sense be applicable to the other; hence I felt most anxious that those who write to instruct us, be careful to state for which branch of the malady their method of treatment is intended to be effective.

In some future article, I will describe my manner of treatment.

Beaver, Pa.

The Report of the proceedings of the 20th annual session of the International American Bee-Association is now published. The price is 25 cts., postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Feb. 19-20.—Ohio State, at Cleveland, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 19-20.—N. E. Ohio, N. W. Pa., and Western New York, at Cleveland, Ohio.
Geo. Spitler, Sec., Mosiertown, Pa.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Carniolan Bees vs. the Italians.

Will Mr. Pratt please answer the following questions through the BEE JOURNAL? 1. Are the Carniolan bees as hardy as the Italian bees? 2. Are the Carniolan bees better workers than the Italians?
Eleva, Wis. WILLIE C. ADAMS.

Mr. E. L. Pratt answers the foregoing questions as follows:

1. The Carniolan bees, in their purity, are the gentlest and the most hardy bees in the world. *Pure Carniolan bees should show no yellow bands.*

2. On comb honey, yes; but on extracted honey it is "nip and tuck" between the two races. Carniolans will work on the bloom under circumstances when Italians would not leave the hive. Carniolan colonies are easily built up for the harvest, on account of the extraordinary prolificness of the queens. By proper management, Carniolans are not more inclined to swarm than Italians.—E. L. PRATT.

The Past Season in Missouri.

How I would like to make a great, large, long row of figures to tell how much honey I have taken from 23 colonies, spring count, the past season; but circumstances will not admit of it; 840 pounds, in one and two pound sections, is all that I have that would do for our home market, which is mostly white clover. Heart's-ease has been, years prior to last fall, quite productive of honey, but the past season I pronounced it a failure. I was very much in hopes that golden-rod would assist in making winter stores, but no such assistance responded; its gay plumes were waving in all directions, but our kind of honey-bees had no use for them in this part of Missouri. WM. ROBSON.
Rolla, Mo., Jan. 21, 1890.

Honey from the Golden-Rod.

"I do not believe that there was ever one ounce of honey gathered from *golden-rod*"—thus saith Ira Reeves, of Carmi, Ills., on page 58. Illinois is a great State—it is long and it is broad, and has big men in it—as large as Mr. Doolittle—yet they have never seen every clump of golden-rod and every bee upon it. Now I believe a good many things that I never saw. I believe there is such a man as Ira Reeves, although I never saw him. In August, of 1881, I was at Bethlehem, in the White Mountains, and the hotels were crowded. As I was hunting a place to lodge, I saw some old-fashioned box-hives, and as there was no fence, I went up to them, and I never saw bees carrying in honey faster—no, not in America or Heidelberg. Being of an inquistive turn of mind, I looked to see where the honey came from. Every fence-corner, side of road, or pile of stones, was decked out with the rich, golden plumes of golden-rod. I did not take it for granted that the honey came from golden-rod, but I went up to it, and I never saw so many bees together, gathering honey, before or since. A few days afterwards I was at Burlington, Vt., and I crossed a deep cut in the railroad, and on the side was a bed of golden-rod, and there were as many as a score of bees on one clump. The people there seemed to think the feathery plumes of golden-rod ornamental, as large vases of it adorned their pulpits, and I saw a man in New York City selling it.

Peoria, Ills. MRS. L. HARRISON.

Making Cones for Bee-Escapes.

Will Dr. G. L. Tinker please explain how he makes the cones to the Dibbern bee-escape? Do we understand that they are a pear-shaped cone, and put in lengthwise, and only one-half tacked down with a smaller-shaped, but smaller-sized, cone inside, and a hole bored through the board to the smaller cone? GEO. W. HAMILTON.

North Syracuse, N. Y.

Below is Dr. Tinker's reply to the foregoing questions:

The cones for the Dibbern bee-escape may be made as following: Take a piece of board 9-32 of an inch thick, and make a triangular piece 3 inches across the base and 4 long. Nail it to another board, and it is ready to form the cones upon. Lay on a square piece of green wire-cloth, and bend it to place with a strip of wood. If the cloth is placed rightly, there will be formed a flat cone with an opening at the apex, just large enough for a bee to pass through, and the base will be open. Make two cones on the same form, but one enough smaller than the other so that when placed under the larger one, there will be a space of ½ inch all around. Nail the smaller cone over the ⅝-inch hole in the board, and close the base with a narrow piece of wood, and nail it down. Then nail the larger cone over it, and close the base in the same way. If the cones are let into an inside cover, as described on page 10, the whole may be used as a bee-escape, or as a cover, as may be desired. When in use as a cover, the ⅝-inch hole on top is to be closed with a common cork.—G. L. TINKER.

Good Location—Swarming, etc.

The past season has been a very good one for honey here. I started last spring with 65 colonies in very poor condition, increased them to 97, which are in good condition, and took 8,000 pounds of extracted honey. My bees were obliged to build the comb that I used for extracting, as I had no supers on hand—of course I gave them foundation. I have the Langstroth 10-frame hive, and I like it very well. My bees are in warm quarters now—in a root-house, or cave, as some call it. My greatest trouble in bee-keeping is to keep the bees from swarming. I have tried everything that I know of, but all is of no use. Tearing out the queen-cells has not kept them from swarming, as some say it will. I took out all of the queen-cells on one day, and the next day they sent out a swarm. My bees are a mixed strain—they are the Italians and blacks, or hybrids, and were very cross the past season. I lost only one swarm the past year, which left me while I was trying to hive three others, all of them in a bunch.

Can kerosene-oil barrels be cleaned and used to put honey in? If so, how?

C. A. DAVIS.

Bloom City, Wis., Jan. 17, 1890.

[NO; they will ruin any honey put into them.—ED.]

The Place to Breed Pure Queens

I take great pleasure in reading the BEE JOURNAL. My health failed so that I was obliged to leave my bees and family last July. I came here and pre-empted 160 acres of land in the great woods of Michigan. I expect to return in March. This would be a grand place to breed pure queens, as there is not a wild honey-bee in these woods, as I can find. A. M. ALTON.

Ontonagon, Mich., Jan. 6, 1890.

Young Bees Flying.

We had very mild weather until Jan. 13, when the mercury fell 40 degrees in the afternoon. Bees had carried in pollen almost every day since Dec. 14. I have young bees flying. Bees are in good condition, and show fair prospects of being very strong for the early spring work. Last year's crop was very poor—so poor that I shall not attempt to make an accurate report, being something like 20 pounds of surplus, above what I had to feed back.

JAS. A. KING.

Sub Rosa, Ark., Jan. 21, 1890.

Swarming—Golden-Rod Honey.

I have 32 colonies of bees, and would like to have them swarm once apiece. In this case, would it be proper to put on supers before swarming?

There seems to be a disunion among bee-men in regard to golden-rod as a honey-plant. Mr. A says that he never saw but one bee on this plant in his life, and that looked as if it were lost. I want my friend A to know that I have seen as many as 20 bees on one stalk. Next comes Mr. B, who said that there are about 40 different kinds of golden-rod. I never saw but one genuine golden-rod; but we have a species of golden-rod which we call "Spanish-needle," and the latter seems to be one of the very best of honey-plants. Had it not been for this beautiful flower, I would not have had honey enough to pay for taking it off. I vote for golden-rod, every time; not only for honey, but for our "national flower."

Stockbridge, Mich. ORVILLE JONES.

[After the first swarm issues, put on the supers.—ED.]

Reasons for Not Taxing Bees.

I send an item from the Nashua (Iowa) *Post*, which I wrote for the purpose of bringing the minds of the people to the absurdity of taxing bees; and to bring the question more directly before the bee-keepers of this State, I request its insertion in the AMERICAN BEE JOURNAL. To make a full statement of the case, would take too much space. THOS. TRACY.

Nashua, Iowa.

The item referred to by Mr. Tracy, reads thus:

In the first place, bees are insects, and are not taxable under the laws of the State. Second, the State attorney decided, some years ago, that they were not taxable. The law allows all animals under one year old, exempt, and all products of the season, as hay, grain, or other farm produce. Any man or woman can build a fish-pond, and keep fish of any age; build a fine poultry-house, and keep any amount of poultry of any age. They can procure silk-worms, and go into the silk-business, and so on.

Now with regard to bees: There is but one kind of bee that lives to be a year old—that is the queen, and not one in one hundred of them. At the time of the yearly assessment of personal property, no one knows how many colonies of bees he has alive, or whether he will have any at the first of June, when it is time for the season to begin. There is no honesty in the law, nor in the manner of using it. Some counties tax them, and some do not. Some people report 15 or 20 per cent. of what they think they may have, and so on. There is nothing that tempts people to be dishonest, like dishonest laws. Let the law be repealed.

Results of the Past Season.

I commenced the spring of 1889 with 16 colonies. The forepart of the season was poor, on account of cool and wet weather; the latter part of the season was too dry, the frost in June killed the linden bloom, yet amid all this discouragement, I got 2,136 pounds of honey (mostly extracted), and increased my apiary to 50 colonies, with an average of 25 pounds per colony, of good honey. They seem to be wintering all right in the cellar. O. P. MILLER.

Glendon, Iowa, Jan. 26, 1890.

White Clover Looks Well.

Bees are doing well here; they have been carrying flour from the mill for several days with a vim, but the weather is some cooler now, and they have ceased to fly. My report for 1889 is as follows: 750 pounds of extracted honey, 50 pounds of comb honey, 5 pounds of wax, and 5 swarms, from 20 colonies, spring count. The honey was principally from white clover and asters. White clover is looking very well here at present. I vote for *clover*, for the "national flower."

GEO. W. MORRIS.

Cornishville, Ky., Jan. 13, 1890.

Wild Honey—No Winter.

Will some one tell me (Mrs. Harrison, especially) what wild honey is? I was perusing some of the old copies of the BEE JOURNAL, and noticed a piece about Lizzie Cotton; I instantly thought of what a narrow escape I had from being a victim to her cheating ways.

My 5 colonies of bees are snugly tucked away on the summer stands for the winter. As yet we have had scarcely any snow here, and very little cold weather. We do not know what it is to see ice one inch thick this winter. My partner and I intend to buy an apiary of 7 colonies, as the owner made a failure last year, and now wants to sell. We had poor results last season, but we are not discouraged, by any means. O. R. HAWKINS.

Bellport, N. Y., Jan. 22, 1890.

Superiority of the Chaff Hive.

In the replies to queries on page 37, there seems to be some difficulty about chaff hives. I think that too much chaff causes more of the trouble than anything else. A chaff hive of the right sort, should have no chaff where the surplus honey is stored. The hive that I have used for a number of years is a chaff hive; the brood-chambers are packed with chaff. It never gets wet or damp, and bees store one-half more honey in them than in a single-walled hive, and sometimes two and three times as much, there being room for more sections than on single-walled hives. Then, you can regulate them for heat and cold to suit your notion. The brood-nest is double-walled, and packed with chaff, which makes it so warm that the bees soon go up in the surplus apartment to work. I would not give one chaff hive for 2 or 3 single-walled ones. The top of my chaff hive hinges on the front board, and shuts down, so that a lock can be put on it, and lock it up, and no one can get in without breaking the lock.

THOS. HOEY.

Past Season in Pennsylvania.

I am well pleased with the BEE JOURNAL, and could hardly do without it any more. I have 17 colonies of bees, which I think are in pretty good condition. I believe they all have enough stores for the winter. I had 8 colonies in the spring of 1889, increased them to 17, but I did not get very much surplus honey, as it was too cool and wet last spring, and it rained nearly all summer. In the fall the weather was middling good, but we cannot produce honey here as in the Western and Southern States. If I had all Italian bees, they would do much better. I have one colony of nearly all Italians, which did the best of all. There are lots of bee-keepers here that know they have bees, and that is about all.

H. H. ARNOLD.
East Salem, Pa., Jan. 16, 1890.

HONEY AND BEESWAX MARKET.

DENVER, Jan. 27.—1-lb. sections, 13@15c.; Extracted, 7@8c. Beeswax, 20@25c. Market well supplied. Demand moderate.
J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Jan. 25.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Jan. 22.—We quote: White clover 1-lbs., 11½@12½c.; 2-lbs., 10@11c. Basswood 1-lbs., 10½@11c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.
R. A. BURNETT, 161 S. Water St.

DETROIT, Jan. 24.—Comb honey is quoted at 12@14c. Sales slow. Extracted, 7@8c.—Beeswax, 24c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

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☞ We have some full sets of the BEE JOURNAL for 1889, and *new* subscribers can have the full sets for 1889 and 1890 for $1.80 until all are gone.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, *Sec. and Treas.*, Bedford, O.

☞ The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890. GEO. SPITLER, *Sec.*

Our Clubbing List.—We have now made arrangements with publishers of metropolitan Weekly Newspapers, by which we can club them at the very low prices quoted in the **LAST** column, without premiums. The regular price of both is given in the first column. One year's subscription for this JOURNAL must be sent with each order for another paper:

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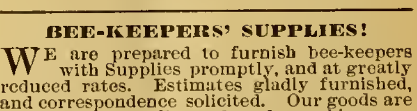
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PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Feb. 15, 1890. No. 7.

EDITORIAL BUZZINGS.

☞ The honey-bee is a regular merchant. It "cells" combs for a living.

◆

☞ One apiarist first ordered a thousand Almanacs. These worked so well in disposing of honey, that he has just bought 3,000 more. It pays to scatter them liberally.

◆

Mr. George Henderson, for many years sub-editor of the *British Bee Journal*, died on Dec. 21, 1889. He was an accomplished linquist, a Greek scholar, and a highly-esteemed gentleman.

◆

☞ Among those prominent apiarists who have been visited by *la Grippe*, we may mention G. M. Doolittle, C. P. Dadant, Ernest Root, J. Van Deusen, James Heddon, J. E. Pond, E. L. Pratt, and many others whose names we do not now recall. They all have our sympathies.

◆

Our Thanks are due for the many kind allusions to our late illness in the bee-periodicals, as well as in hundreds of private letters. We are sorry to learn that many of the editors of the bee-papers have suffered from *la Grippe*, in more or less severity. We never recovered so slowly from any previous illness, and this seems to be the case with others. The grip on our vitals was a tight one; and to-day, after a month's tussel with it, we are not able to do half as much as formerly in the same time. We do not want to have anything more to do with anything Russian—the Cossacks may keep it at home, or else banish it to Siberia, as they do all the rest of their unwelcome things.

Honey for La Grippe.—The item on honey for *la Grippe*, published on page 35, is being copied quite largely, through the influence of bee-keepers all over the country. The Elgin, Ills., *News* published it, and then followed it with these additional lines:

> We know of one family that has eaten freely of honey for a couple of weeks or so, and while neighbors have had the grip, it has not invaded that household.

Honey is both good as a preventive and to build up the system after *la Grippe* has departed, and if the legacy of complications is not too great, it will soon restore the patient to the usual strength of body and mind.

If the complications are too numerous, of course it will take *time* to overcome them, as will the most careful nursing, and the most efficient physician's prescriptions. We *know*, for we have had lots of experience in that line for the past month or more.

◆

Taxing Bees in Iowa.—Mr. G. B. Olney, of Atlantic, Iowa, has sent the following to his local paper, the *Democrat*, which published it in a late issue:

> Last winter our assessors were instructed by the Board of Supervisors, to assess bees at $2 per colony. This year they dropped one-half. Well, just drop another dollar, and you will come to a standard of a true interpretation of the revenue laws of Iowa. Bees are exempt, and you cannot read the law any other way.

The very convincing article by Mr. Eugene Secor, published on page 666 of last year, settles the point that, in Iowa at least, bees are not taxable. Mr. Olney adds the following about the sale of bees at auction in that locality:

> Bees, at a public sale near here a few days ago, sold at $4 per colony. This is much better than I have seen for many years.

◆

The Three bee-periodicals heretofore published in England have been consolidated under one management, viz: Mr. T. W. Cowan and Mr. W. B. Carr. The *British Bee Journal* is published weekly, and the *Record* and *Adviser* have been united, and will be published monthly, as heretofore. The sizes have been changed, and excepting the narrow margins, both periodicals make a good appearance. We wish both them and the editors much success.

◆

An Enigma.—On page 72, Mr. Pratt makes an allusion to Messrs. Holtermann and Young. The article was put in type while we were unable to pay much attention to such matters, and, in answer to several inquiries, we must say that we have not yet discovered what the writer was driving at. Our English friends seem to relish such items written by "Amateur Expert," but we do not think that we have any use for them in America. Please do not ask us to explain any more of the riddles.

A Use for Propolis.—It appears that in Russia propolis is used for varnishing wooden ware, and resists the dissolving powers of hot water. Mr. A. Tonlareff states that it is purchased by the hucksters, who pay about one halfpenny for permission to scrape or plane the hive that has lost its bees. The shavings covered with propolis are heated, put into a wax press and subjected to the treatment used in the extraction of beeswax; the propolis is then purified in hot water, to which sulphuric acid is added. About 50 per cent. of propolis is thus obtained, which sells at 40 cents per pound. The propolis is poured into hot linseed oil and beeswax in the following proportions: Propolis, 1; beeswax, ½; oil, 2. Previously the oil should remain hot on the stove for 15 to 20 days without boiling, to give it the property of drying.

The wooden ware is dipped into the above-mentioned preparation, and must remain in it for 10 or 15 minutes, after which it is cooled, and rubbed and polished with woolen rags. Propolis is so plentifully collected by the bees in some parts of this country, that I should imagine it would repay the bee-keeper to save it. It would do capitally for coating the interior of wooden feeders, etc.—*Australasian Bee Journal.*

◆

James Vick. seedsman, of Rochester, N. Y., offers $1,000 in cash premiums, to be awarded at the Illinois State Fair, to be held at Peoria, Ills., Sept. 29, 1890, by the society's judges, for best cabbage, celery, potatoes, cauliflower, tomatoes, musk melon, onion, and mangel. Last year the prizes awarded at the New York State Fair went to Pennylvania, Michigan, Iowa, and New York. This year we are anxious to see Illinois take the lead, and hope that all interested in vegetables will send to Vick, of Rochester, for particulars regarding this offer. No doubt it will be one of the principal features of interest at the Fair.

The Vicks will erect a separate building, or tent, in which they will make a grand show of flowers with the vegetables, and will be on hand to receive their friends. Every person growing vegetables should send 10 cents for a copy of "Vick's Floral Guide," and learn the facts. It costs nothing to try.

"Vick's Floral Guide" is one of the handsomest catalogues published. The illustrations are intended to give the reader a correct idea of the plant or flower illustrated.

◆

☞ During January, the weather was warm and moist in the Northwest. February comes in with snow and colder weather. The bees wintered on the summer stands have been "on the wing" considerably, and if the "spring dwindling" is not very severe, there will be plenty of bees to gather the harvest next season. We have not had such a winter for more than a dozen years.

Doolittle's New Book on "Queen-Rearing" receives excellent endorsement in New Zealand. The *Australasian Bee Journal* for December contains the following:

> I have recently been trying Doolittle's plan of queen-rearing, and although I have only given it one trial, it was quite successful. The cells, twelve in number, were cast on a smooth piece of glass that just fitted the bottom of a natural queen-cell. In them I placed a small quantity of royal jelly, and on this I transferred an ordinary worker larva about thirty hours old, with the aid of a pointed quill.
>
> The cells were then fixed with hot wax to half a bottom-bar, and inserted in the centre of a comb from which a piece had been cut about the size of a man's hand, which was then placed in a two-story Langstroth hive, the queen being confined to the bottom box by means of perforated zinc. The bees immediately commenced working on these embryo cells, and in due time I cut out ten fine queen-cells, which were placed in a nursery, with the result that eight emerged.
>
> At the same time I tried a new plan of my own, which I prefer to Doolittle's, for the reason that the delicate operation of transferring larvæ has not to be performed. These gave me queens equal to Doolittle's in appearance and number, although the cells were not so sightly. However, as I am still carrying on my experiments with both methods, I prefer to say no more about it until the end of the season, when I will fully describe my own method. However, I have proved to my satisfaction that it is not necessary to remove the reigning queen, in order to induce the bees to construct cells and rear queens.

Our Friend, Mr. Eugene Secor, was elected President of the Iowa State Horticultural Society, at the annual meeting held at Des Moines last month. Mr. Secor began on the ground floor, being first a Director, then Superintendent of an Experiment Station, which position he now holds; then Vice-President for the past three years, and he has now reached the top round in the ladder of promotion. His election to the position is a well merited compliment, fairly won by faithful and intelligent service in the science of horticulture. Mr. Secor is a practical farmer, "having been to the manor born," and has spent a good deal of time in the study of agricultural pursuits. The above is gleaned from the Winnebago *Summit*.

New Catalogues and Price-Lists for 1890 are received from—

Colwick & Colwick, Norse, Tex.—4 pages—Bees and Queens.

I. R. Good, Vawter Park, Ind.—1 page—Italian and Carniolan Queens.

Jerry A. Roe, Union City, Ind.—12 pages—Bee-Keepers' Supplies.

J. W. Bittenbender, Knoxville, Iowa—24 pages—Bee-Keepers' Supplies and Italian Bees and Queens.

H. A. Hubbard, New Lisbon, N. Y.—4 pages—Hubbard's Advertiser.

R. E. Smith, Tilbury Centre, Ont.—20 pages—Apiarian Supplies.

F. B. Mills, Thorn Hill, N. Y.—36 pages—Seeds.

Jas. J. H. Gregory, Marblehead, Mass.—60 pages—Seeds.

BIOGRAPHICAL.

R. F. HOLTERMANN.

It affords us no little pleasure to give, in these columns, the likeness, as well as a short biography, of our friend and co-worker, Mr. R. F. Holtermann, of Romney, Ont., Canada. It is seldom that one so young in life comes so rapidly into prominence, as has Mr. Holtermann; yet it is no great wonder, when one considers the push and energy that has ever been the marked characteristics of the man—especially when coupled with a firm determination to be, and to do, right.

The following is a condensed biography of Mr. H.:

Richard Ferdinand Holtermann was born in the city of Hamburg, Germany, on June 14, 1860. Two years later, the parents, with their son and two daughters, emigrated to Canada, settling in the county of Renfrew, Ont. There, at the age of 12 or 13, young Holtermann received a portion of his education from a governess. Later, he was sent to a private school, and shortly afterward he attended the Ottawa Collegiate Institute, at Ottawa. There his mind wandered, he says, in the direction of boating, cricketing, swimming, etc., rather than toward study.

R. F. HOLTERMANN.

When about 14, his father moved to Toronto, and then sent his son to the Upper Canada College, where he received the "1 A diploma." He then decided to go on the farm. Shortly afterward, he attended the Ontario Agricultural College, where he graduated with honors, being only 70 marks out of 4,000 behind the first medalist. It was in this school, in the capacity of librarian, that the subject of apiculture was opened up to him through the medium of several bee-books.

The next season was spent as a student with Mr. D. A. Jones, in the apiary. He next made the great mistake, he says, of embarking in apiculture a little too soon. The result was, he learned many severe lessons. With his apiary of 79 colonies he underwent the trying ordeal of a bad season, to begin with. However, he secured enough Alsike clover honey to enable him to secure the second premium at the Toronto Industrial Exhibition.

Later, he entered into some speculations, and came out nearly $1,000 in debt; but, unlike a good many young men, he was not discouraged, but went to work again, and paid 100 cents on the dollar, instead of trying to get out, as he could have done, by paying a few cents on the dollar. He entered the employ of E. L. Goold & Co., of Brantford, commencing at 85 cents a day, and left as manager of the supply business, and editor of the *Canadian Honey-Producer!*

He married, on May 17, 1887, Lois, daughter of S. T. Pettit, of Belmont, Ont., whom he met at the last meeting of the North American Bee-Keepers' Convention, held at Rochester, N. Y. They have one son and a daughter; and in their home they seek to have God's will their own. As might be expected, Mr. H. uses neither tobacco nor liquor.

Mr. Holtermann has made bee-keeping pay, and he has averaged, he says, latterly, $8.00 per colony, income. He thinks that anybody can do as well in a fair locality, providing they start with one or two colonies.

Mr. Holtermann has been active in bee-associations, in which he has held various offices. At the meeting held in Columbus, O., his name was proposed several times for the presidency of the association; but he very modestly declined the honor, in favor of another member. His name was next proposed for secretary, and was carried by the unanimous consent of the association.

He has held various presidencies, and a large number of secretaryships; and, at one time, the bee-departments in three agricultural periodicals.

A Useful Salve.—The following recipe for making salve is much valued by those who have used it. With it are made plasters equal, or perhaps superior, to any obtained from druggists, and at an expense so trifling that one can be afforded for every pain. They have been used upon the chest and between shoulder-blades, when there was a soreness of the lungs, with tendency to pneumonia, and also to relieve back-ache, which is woman's almost universal complaint. The salve is indeed so valuable, that no household should be without it:

> Two pounds of resin, 3 ounces of beeswax, 4 ounces of mutton tallow, and one gill of whisky; put into a kettle sufficiently large that it may not boil over, and stew until dissolved. Make it into sticks like molasses candy. Place a tin upon the stove, and upon the tin a piece of fine wrapping-paper, a little larger than the required plaster, and rub the wax upon it.

☞ Some have requested us to print a card on a less number than 100 Honey Almanacs, and we have concluded to accommodate them. We will furnish 25 copies with card printed on the first page, **postpaid,** for $1.10; 50 copies for $1.70; 75 copies for $2.30. See prices for more, on the page 95.

QUERIES and REPLIES.

Making Wooden Separators—The Kind of Wood.

Written for the American Bee Journal

Query 686.—I wish to use wooden separators in my **T**-supers. I find that some manufacturers saw them 1-16 of an inch thick, and others slice them 1-20 of an inch thick. 1. Are the sliced as good as the sawed ones. 2. If not, are they at all satisfactory? 3. Of what kind of wood is it profitable to make separators?—Iowa.

I prefer tin separators.—G. M. Doolittle.

1. I have never used the sliced separators. 3. Basswood.—J. M. Hambaugh.

I have had no experience with wooden separators.—A. B. Mason.

Wooden separators did not prove satisfactory with me, and now I use only the tin.—P. L. Viallon.

1. The sliced ones are more liable to warp then the sawed ones. 3. Pine and basswood are both good.—Mrs. L. Harrison.

I have no experience with separators, and have no intention of using them. I can crate my honey without their use.—M. Mahin.

1. The sawed ones are the best—they do not warp as much as the sliced ones. 2. Poplar, basswood and pine make good separators—J. P. H. Brown.

1. The thinner, the better, if they do not warp. 2. I use tin. 3. I doubt if it is profitable to make them of wood; but if cheaper than tin, I should use the cheapest wood I could get, that would *stay put*.—Eugene Secor.

1. I *think* that the 1-16-inch, sawed separators are the best. 3. They should be made of reasonably hard wood, or the bees will gnaw them. I have never used sliced separators.—C. H. Dibbern.

1. I have used sliced ones that seemed entirely satisfactory. 3. I never made any, and at the low prices offered, I think that it is more profitable to buy them.—C. C. Miller.

1 and 2. If properly handled, I do not think that there would be much difference. 3. The bees "chew up" basswood, to some extent. Poplar would be better.—R. L. Taylor.

1. Yes; any separator is good, that will act as such; the thinner, the better. 3. Any wood that can be made thin enough, without splitting or warping in use.—J. E. Pond.

1. The sawed ones are the best. Sliced ones are good, if dried in a press; if not, they are crooked, unsatisfactory things. 3. White poplar is good—good enough.—J. M. Shuck.

1. I am using each kind, but I find that the sawed separators are much better than the sliced ones. In slicing, it breaks the grain, and the bees tear it down on the face of the section. 2. The sliced separator will answer, but it is not as good as those sawed smooth. 3. Whitewood is the best that I have used.—H. D. Cutting.

1. No; sliced separators are not as good as sawed ones, if of a suitable thickness. Mine are sawed 14 to the inch. They may be used for many years, and out-last tin. 2. Sliced separators will bulge, warp and get out of shape, and can frequently be used but once. They cannot be used with open-side sections. 3. The yellow poplar, or whitewood, is the best wood to make them of.—G. L. Tinker.

1. The "sliced" separators are superior to the sawed ones, when the work is properly done. All wooden separators that I have handled, are objectionable, because they require nice care and handling to keep them from warping out of all shape. Tin is free from these objections. 3. This is a question that concerns the manufacturer more than the consumer. Linden timber furnishes the best that I have seen, though not as fancy in appearance as white poplar.—G. W. Demaree.

1. The T-super is a good surplus receptacle, especially for the use of wooden separators, and whether the sliced or the shaved are the best, depends upon the workmanship. A good sliced separator is better than a poorly shaved one. 2. Yes; sliced separators are perfectly satisfactory, and all the better for being thinner. I have tried all kinds of separators, and wooden ones, from 1-32 to a bee-space in thickness, and taking cost and everything into consideration, I say they should be about 1-20 of an inch thick, and made of first-class whitewood or poplar.—James Heddon.

Heat in Hives with Larvæ and Sealed Brood.

Written for the American Bee Journal

Query 687.—1. Does it require as much heat for larvæ and sealed brood, as for eggs? That is, when a queen has laid as many eggs as the colony can keep at the proper temperature, must she stop laying, or can some of the bees be spared as soon as the eggs are hatched, to cover freshly laid eggs? 2. Do larvæ or sealed brood add any heat to the colony?—Pennsylvania.

At present, I do not know.—H. D. Cutting.

1. Perhaps not. 2. A little, perhaps.—M. Mahin.

1. I think so. 2. Certainly some, though, practically, none.—A. J. Cook.

1. No. 2. Yes. The process of development in animal life produces heat.—A. B. Mason.

1. Probably not. 2. Wherever there is life, there is heat.—Mrs. L. Harrison.

I have not experimented on this line, and can only guess; and, that, you can do as well.—C. H. Dibbern.

This is theoretical with me, but I should say: 1. Yes. 2. Yes; but so little that it is of no consequence.—Eugene Secor.

Sealed brood requires less heat than larvæ or eggs, the latter requiring from 90 to 96 degrees to perfect them.—G. M. Doolittle.

1. I believe about six of one, and one-half dozen of the other. 2. In about the same ratio that the eggs do, under a setting hen.—J. M. Hambaugh.

1. It requires more heat for larvæ and sealed brood, as eggs will retain their vitality at a much lower temperature than larvæ. 2. No; they require heat.—P. L. Viallon.

1. It requires a little more heat for larvæ than for eggs. 2. Larvæ and sealed brood also add some heat to the colony.—J. P. H. Brown.

1. I would rather Prof. Cook would answer for me. 2. I suppose that larvæ or pupæ, or anything else that eats, evolves some heat.—James Heddon.

1. I do not know. Bees in a hive are not practically useful unless there are enough to cover most of the brood-combs in early spring. 2. I do not know.—J. M. Shuck.

1. It depends altogether upon the outside temperature; but it is evident that the living larva develops heat to a certain extent, and, therefore, adds a little to the colony's heat.—Dadant & Son.

Where there is life, there is heat; so the larvæ and sealed brood contribute some heat to the colony, but it is not great enough to mature sealed brood without the presence of the bees, at ordinary summer temperatures.—G. L. Tinker.

1. I do not known, but I am inclined to the opinion that more bees are needed to cover and hatch out a square foot of comb filled with eggs, than to keep the larvæ warm enough in the same amount of comb.—C. C. Miller.

1. Egg-laying and brood-rearing are constantly going forward. The bees will take care of the whole matter, if left alone. 2. Yes, to some extent; but they must be kept warm, else they die, and then no warmth can come from them. What funny questions!—J. E. Pond.

1. The only experience I have in the matter of the query, has been obtained by shipping and receiving eggs, larvæ and sealed brood by mail. The eggs seem to stand the least exposure of all, while the sealed brood will stand the most. 2. In my experince, there is animal heat in a marked degree in sealed brood. Some years ago, my apiary was raided by thieves, and combs of brood were scattered on the ground; there was a hard frost that morning, and some of the combs of brood were white with frost, yet nearly all the sealed brood hatched.—G. W. Demaree.

1. Bees do not hatch the eggs by "sitting" on them, but by the heat generated by their bodies, and confined by the walls of the hive in warm weather, and by the "crust" of the cluster in cool weather, and all parts of such warmed space are kept at the same temperature as nearly as it is possible, for the bees do it so that a given piece of comb is at the same temperature whether it contains eggs, larvæ or sealed brood. 2. It requires much less flame to keep up the temperature of an incubator containing eggs in which are half-developed live chickens, than one containing fresh eggs. The chicks are generating heat, and are "adding heat" to the incubator in perhaps a negative sort of a way. Without question, it is the same with brood. A colony could keep at the desired temperature, a larger space, if it contained nearly mature brood, than if it contained only eggs.—R. L. Taylor.

A Special Club Rate.

A Magazine of the choice literary character which the Illustrated Home Journal sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the American Bee Journal and the Illustrated Home Journal, and mail both periodicals during the whole year 1890 for **$1.60**, if the order is received at this office by March 31, 1890—when this offer will end, the regular rate being $1.75.

☞ Clubs for anything in our Premium List may be for either of our Journals, or for any number of either or both of them.

CORRESPONDENCE.

WIDE FRAMES.

Section-Cases, or Wide Frames?—How Made and Used.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

I am asked by a correspondent to tell the readers of the AMERICAN BEE JOURNAL what kind of a section-case or wide frame I prefer, and use, in working for comb honey. As it is now the time of year when all bee-keepers should be preparing for the next honey harvest, perhaps I cannot do better than to give an outline of what I use, so that any one who desires to try this style of surplus arrangement, can make a few at this season of the year.

While I use and recommend these wide frames, and they are applicable to any bee-hive now in use, I do not expect that all will like just what I do: therefore I would suggest that those who wish to try them, can make only a few at first, then, if after a trial of a year or two they conclude that they like them, they can make more; but if, on the contrary, they do not like them, they have been to no great expense in finding out what they want.

All that is necessary, is to make the sections and wide frames so that they will fit the top of the hive used. Get all the pieces out true and square, after which nail them over a true, square form, so that each wide frame will fit exactly against its neighbor, for one section-case is to be made out of a number of wide frames.

I also use separators on these wide frames, if I want universally nice honey. If to be used on the tiering-up plan, the tops and bottoms are to be made ⅜ of an inch narrower than the ends; if only one tier high, as I prefer to use them, then have the tops the thickness of the tin wider than the sides or ends, for the separators are to be nailed to the ends.

FASTENING ON TIN SEPARATORS.

After using several kinds of materials for separators, I prefer tin to anything else. The nailing on of this tin has much to do with our liking, or disliking, wide frames; for if nailed on loosely, so as to kink and bulge, the operator will become disgusted with them. When I first made them, I used a hand-vise to draw the tin tight, having things so arranged that I could pry over one end of the wide frame, thus stretching the tin so tightly that it would fairly ring when hit a little. While thus working one day, I noticed that in drawing the tin very taut, I often sprung the top and bottom of the frame, out or in, as the case might be, and from this I soon had a way of putting on the tin perfectly, every time.

I made a form a trifle shorter than the frame was long, outside measure; this form being perfectly true and square, which gave advantage over the vise method, for with that the frame was sometimes drawn out of true.

Next, I made a block the size of the frame (except a little shorter), and of the same thickness as the ends of the frames, which was tacked to the form. To use it, I sprung or bent the top and bottom bar of the frame a little, thus shortening it, until it bent into the form, when I laid on the tin separator, placing a straight edge on top of the tin, and a weight on this. I then had the tin just where I wanted it, with all the bulging taken out of it, when it was nailed fast to the wide frame. Upon removing it from the form, the top and bottom sprung back into place again, thus drawing the separator as tight as a drum-head.

After the wide frames are all made, and the separators put on, they are to be filled with sections, when they are ready to be keyed together so as to form the section-case.

I have tried all ways of keying these wide frames together, using in a clamp, etc., all of which I did not like, as I wished a plan that would allow of using as few or as many wide frames on a hive as I pleased—from two up to twelve, according to the strength of the colony; for often, with the old plans, we are obliged to give too much surplus room to start with. Finally, I accomplished what I was after, by procuring some rubber bands about ¾ of an inch wide. These I cut into pieces 2½ inches long. To one end I attached a fine, stout string (by means of a slip-knot) about 5 inches long, and to the other end, one about 18 inches long. The short string was firmly tied to a nail driven into the end of the board which comes against the outside of the outer wide frame; another being attached to the opposite end of this board in the same way.

Lately, I have used coil-wire springs (such as are used on hanging lamps to keep the shades up) in place of the rubber bands, and I find them superior to the rubber, in that they give a stronger tension, and will last a lifetime, while the rubber has to be renewed every few years. Still, the rubber bands answer a good purpose, and can be renewed as often as necssary, where it is not easy to find the springs.

In each end of the board which goes on the outside of the opposite outside wide frame, is driven a large-headed, steel-wire carpet-tack. The tack is driven in within about one thirty-second of an inch of its large head, so that when a string is wound around it a little more than once, it is clamped as securely as if tied.

The wide frames of sections are now placed on the hive, two, three, five, eight, or twelve, as the colony requires; putting on the little outside board to close all, draw the rubber till a strong tension is made, and wind the string around the tack. In this way the wide frames are held as in a vise, yet they give all the lateral movement required, so as to use the right number which the apiarist may desire, and can be taken off as one case, or separately, tiered up, reversed, interchanged, etc., according to the views of the most exacting.

With this arrangement, there is no need of a honey-board to keep the brace-combs off the sections, for they are fully protected by the wide frames. Where contraction of the brood-chamber is practiced, so that there is danger of the queen entering the sections, then it is well to use the wood-zinc, queen-excluding honey-board, which keeps her below, no matter how small the brood-nest.

For new swarms, I like the contraction principle, and use it largely on such; but for all other colonies, I use nothing over the frames except this section-case of wide frames, only where there are not enough wide frames put on a hive to fully cover the brood-frames below, then the bee-quilt, or enameled cloth covering, used before the sections were put on, is folded back over these frames, thus making all tight, so that no bees can come above.

During the height of the season, the whole top of the hive is covered, as a natural consequence; but as the season draws to a close, the wide frames are again contracted, so as to have as few unfinished sections in the fall as possible, when the enameled cloth is again brought into play, spreading it out further and further, as the wide frames filled with honey are taken off, so that at the end of the season, there will only be the two or three wide frames on the hive, which there were to start with.

There may possibly be a little more labor in this way of securing honey, than there is by some other plans, but as it conforms perfectly with the wants of the bees, enough more honey is secured to more than pay for the extra labor.

Borodino, N. Y.

BEE-ITEMS.

Experience with Queens—Races of Bees, etc.

Written for the American Bee Journal

BY JAMES T. FIFE.

In 1888, I ordered 50 queens from breeders who patronize the AMERICAN BEE JOURNAL, and I promised some of them that I would report my success with the various queens. This I could not do without doing great injustice to some who sent me very fine queens; for some of them came early in the season, others late; some came when there was a good honey-flow, others when there was no flow. I took considerable pains in measuring the brood, but the circumstances were so different that I could not make a just estimate, and so better none at all.

I sold all my bees in South Kansas except 2 colonies—one with a Doolittle queen, and the other with a queen from a breeder in Texas. Those 2 colonies I shipped back here to South Iowa; I divided each twice, making 6 colonies out of the two. I took from one of them, spring count, 215 pounds; from the other, 97 pounds of honey, besides rearing queens.

I would get a neighbor bee-keeper to give me some swarms, for which I would give him young queens when reared. I had the queen-cells ready, and when I brought home my new swarm, I put the cell in it, thus letting each swarm rear the queen, to pay for itself. In this way I traded for 14 swarms, and now I have 20 colonies, apparently in good condition, to commence with next spring.

I did not weigh the honey taken from the bees traded for, but I sold $15.00 worth, gave away considerable to friends, used all we wanted in our family, and, on Aug. 1, we had a full barrel of honey still on hand. How is that for 2 colonies? This was all white clover honey; heart's-ease has formerly been the honey-plant of this part of the country, but this year it gave no nectar.

I have for years been a reader of the AMERICAN BEE JOURNAL, and am much pleased with many of the contributors. Recently I noticed Prof. A. J. Cook's description of the various races of bees. In the past I have been experimenting with many of the different races, and I concluded to use the Italian bees. I find that there is more difference in families, than there is in races, so I have sought after the most prolific and industrious families; but after reading Prof. Cook's article, I have decided to try the Carniolan bees the coming summer.

I practice reversing the brood-nest, and when it is done at the proper time, I believe it is profitable, but not otherwise.

I consider that it pays to feed bees, so I feed in two ways, viz: First, in the spring and summer, by filling the cells and hanging the frame in the hive; second, in the winter, by making honey-candy, and placing it over the frames in such a way that the bees can get around it; then it is unnecessary to feed every day, as one can feed sufficient for several days, with no danger from robber bees.

No person should keep bees unless he gives them the same attention that he gives to any other pursuit. The person that does not take interest enough in the bees to study their habits, and provide for their wants, is unworthy the fruit of their labors.

Corning, Iowa.

HONEY.

Calling it "Modified," Instead of "Digested," Nectar.

Written for the American Bee Journal

BY CHAS. DADANT.

These words, "digested nectar," advocated by some savants of America, have, so far, occupied too large a space in the columns of our bee-periodicals. According to the ideas of these gentlemen, "digested" means that honey is in a condition to be ready for assimilation; yet I have seen some people getting indigestion by eating comb honey, when their stomachs were yet loaded with some of the food of their last meal. In such cases, at least, the indigestion contradicted the idea of Mr. Heddon, that the wax of the comb helps digestion.

Mr. Kanzler, on page 70, goes further in the definition of the word digested, for he says that eggs are digested worms—and milk, digested grass. Then the horns, skins, hairs, bones, and flesh of cows are digested grass, too; yet they are far from being ready for assimilation.

No doubt the word "digestion" means change in the substances digested. In chemistry, it means to mix or to combine slowly some substances, such as stomachs of hogs with chlorhydric acid to obtain pepsine; thorn apple and alcohol, to get a narcotic; bitter apple with alcohol, to have a purgative and vomiting drug, etc. But to the minds of most of us bee-keepers, the idea of such digestions is far from exciting appetite. Furthermore, these digested drugs are not all ready for assimilation.

The nectar is often but half-digested, and, as we cannot say that a half-changed matter is digested, I think that this term, when applied to honey, ought to be replaced by the word "modified."

The discussion raised on this word is of no more consequence, for us bee-keepers, than the one relating to the uses of the three pairs of glands of worker-bees. It had been admitted, for scores of years, that the highest pair of these glands had the function of secreting the larval food, when Leon Dufour advanced that this food was a product of the stomach of the young bees, and found a few savants to endorse this view; although coming from a man who had emitted the absurd theory that the bee-keepers, who had advanced that the scales of wax were secreted in the pockets placed between the rings of the abdomen of bees, were mistaken, for these particles of wax were produced in their mouths, and placed in these pockets by the bees, to be flattened and ready for use. Both of these theories show that, too often, men of science regard as truths, the conceptions of their imagination.

Hamilton, Ills.

HIVE-COVERS.

The Advantages of the Flat-Board Covers for Hives.

Written for the American Bee Journal

BY L. W. LIGHTY.

The cover is one of the important parts of the hive. There are a great variety in use, such as enameled cloth, or oil-cloth, straw mats, and mats, etc., of other material resting on the frames or sections. These mats or cloths are very inconvenient—make double work, and, most of all, are death-traps, for at some unexpected time, the bees will find a little corner or hole to get into the cap, or space above the cloth, and when you open it, you will be horrified to find a pint or more of dead bees, and then you will wish you had a better plan, and resolve to look oftener after them; but it will occur again and again.

The only hive-cover that is convenient, and will save the lives of the bees, is a plain, good board, with two cross-pieces nailed or screwed on top, at each end, to keep it from warping. There must be a bee-space on top of the brood-frames, and on top of the sections, and you can lay the cover on, and be through, with no fixing or adjusting of mats, and, after all, have a lot of bees die of starvation.

I notice that some bee-keepers object to the board because so many bees are smashed; but I can open and close ten hives with flat-board covers, in the same time that it takes to open and close five hives with a cap and mat, and with killing only one-tenth as many bees. The flat board is also cheaper, and more easily made. In these days of close calculation, we must economize.

Some will want a cap to put a cushion in, in winter; but I simply add a brood-chamber, and have the space I desire for winter, and am not bothered with it when I do not need it.

I was never troubled with brace-combs in the bee-space under the cover, if made of the proper size; but when using a mat, the bees would work until they had a space arranged to suit themselves, and had the mat secured from side to side.

I am sure that if any one gives the flat-board cover a fair trial, he will have no other.

Mulberry, Pa.

FLORIDA.

Bees Gathering Honey—Swarming Expected Soon.

Written for the American Bee Journal

BY JOHN CRAYCRAFT.

We read the BEE JOURNAL carefully, and learn from its pages what the bee-keepers through all the North are doing, and in various places in foreign climes. The words given by the numerous correspondents show that throughout the North there is a very mild winter, very often with bees on the wing. Whether this will terminate for the best, is to be decided later. I fear that stores will be consumed before they will be able to gather again.

This is not the case with us. I do not think that there have been five days since Dec. 1, but what our bees have stored a surplus. About Dec. 15, the maples began to bloom, and there was a continuous flow of honey, the bees gathering a surplus and building comb; and for the past ten days the willows have been giving them all they can do—more honey being stored than is best for fast brood-rearing, the queens being crowded. We did not desire to extract, for the honey is dark, with a great deal of pollen in it. This willow-flow will last, from what I saw to-day along the river, for at least ten days more; there is great quantities of it along the river, and in the swamp. The willow is similar to the kilmonark that I have seen in Indiana and Kentucky.

Drones are out daily, and we expect swarms at any time, although we are trying to equalize all colonies, so as to have all the field-bees possible when orange bloom comes on, which will be about the last of February, from which we get our first fine honey; and this will last for about four weeks. We hope to get it strictly pure, and we hope to send a sample to the BEE JOURNAL office, so that the editor may judge as to its merits.

We have only 38 colonies, but expect to double them within the next sixty days. We will work for increase, as our fields would suffer, for along the river for about fifty miles, it is almost one continuous, unbroken swamp on one side or the other, with many orange groves, some on the river banks, and others on the dead river branches, that extend out in many places; so that where desired we can move bees bees very easily and safely on the river, by boats (small row-boats). The river is very narrow, and is not much in the way of bees flying. This day I saw our yellow Italian bees two miles up the river, on the willows. There are no Italian bees near us.

St. Francis, Fla., Jan. 30, 1890.

SELF-HIVER.

Its Advantage in the Apiary—Foul Brood.

Written for the American Bee Journal

BY GEORGE SHIBER.

I was very much interested in reading, on page 27, Mr. Alley's article in regard to his new swarm-hiver. It is truly a novelty in that line, and it is much more interesting to note that it will work. I am glad that some one has perfected an arrangement which is for the good of a part of the fraternity of bee-keepers, who do not make a specialty of bee-keeping, but keep say ten or a dozen colonies for the pleasure and profit of the honey.

Swarming has been the only objectionable thing about bee-keeping, to me, and now *perhaps* that objection can be safely laid away to rest.

There are a number of persons who have made known the fact since, that they have used a similar device for hiving swarms, but the question naturally arises—why have they not made it known? What a boon it will be, if practiced, to have bees hive themselves! Who, but the initiated, can imagine the consternation of a bee-keeper, upon arriving home from business in the afternoon, to find his best queen has departed with—well, never mind the rest, a person feels tired, nevertheless; and I say "Hail!" to the man who can make us easy on that score, and there are many who can second this.

AN EXPERIENCE WITH FOUL BROOD.

On page 54 is a very able article on "Foul Brood," by Mr. R. L. Taylor. It is able, because it is true to nature, and his description of it is just as it appears. He says:

"The descriptions of it, which have been most prominent, are of it as it appears in badly diseased colonies." Every bee-keeper whose apiary has never been visited by the disease, ought to read that quotation twice, and then read "between the lines."

How well I remember the first time I saw indications of foul brood in my own hives. Perhaps, on the whole, there were not over a hundred infected cells in the hive; nevertheless, I was scared at once, and upon taking out portions of the diseased brood, I discovered the indications which all, no doubt, are familiar with.

I went to work at once, and commenced dosing with medicated syrup, carbolic acid being the active principle (the one five-hundredth formula). Honey was coming in freely, so I poured it over the combs (the feed); consequently the disease did not gain much headway, or rather, it got better. "O!" though I, "the disease is mine; I have a finger on its throat." Did it cure it? "Wait till you hear the end."

When the honey-flow ceased, and the feeding was stopped, they were worse than ever; the feed is good to keep it in check, but I cannot believe that it will stamp it out, root and branch, as long as the bees remain on the old combs; for it is a fact, that the disease leaves a black, tary substance in the cells, and I am inclined to believe that this gummy mass retains the germs of disease. The only thing I know, which will entirely eradicate the disease, is by giving them a new hive and sheets of foundation (after Muth's treatment).

As regards the honey crop: The disease can be kept in check so that it will not materially decrease the surplus honey. Feeding phenolated syrup in the spring, prepared as laid down in Cheshire's book, you will find the hives boiling over with bees, ready for the honey harvest, so that no one need expect to lose much in this respect. On the other hand, your colony, or colonies, need much more attention; for if the disease is allowed to gain much headway during that period of the year when little honey is coming in, it will greatly deplete their number of bees.

Another idea is in regard to the cappings being perforated at a certain stage. Mr. Taylor's experiences agree with mine. I have noted the fact that you will not find one-third of the diseased cappings pierced, and a part of these will have a large, irregular hole, while others have smaller piercings down to the regulation "pin-head size."

I vote for the golden-rod as the "national flower."

Olean, N. Y.

PRIZE ESSAY.

Extracted Honey—One Method of Its Production.

Written for the American Bee Journal

BY O. P. MILLER.

I do not know of any better way to write on this subject, than to give my way of producing extracted honey.

I use the Langstroth, 8 and 10 framed hive. In the spring I build up colonies as fast as I can, during fruit-bloom, so as to get them in prime condition by the time white clover blooms—this I do by supplying the hive with empty worker-comb (kept over from the previous year) as fast as needed, until they are just booming with bees.

I then put on the surplus hive or super, and put two or three empty combs in super No. 1, and two frames of brood and honey from the brood-chamber, and fill the brood-chamber with empty brood-combs.

As the brood in super No. 1 hatches out, the bees fill the cells with honey, and also work on the other empty combs, as needed, until the hive is full. As soon as super No. 1 is full of comb, and nearly full of unsealed honey, I lift it off, and put in its stead super No. 2, taking three frames from No. 1, and put them into No. 2, with three or four empty frames, as the strength of the colony may indicate; I also fill up No. 1 again with empty combs, then put No. 1 on top of No. 2, observing this rule—always putting the frames, whether full or empty, in the center of the hive, be it the same super or brood-chamber, that the cluster be not broken but continuous from the bottom to the top.

As soon as the frames of super No. 1 are full, and two-thirds sealed over, it is extracted, and immediately put between No. 2 and the brood-chamber; and No, 2 is worked in the same way, leaving the brood-chamber entirely to the queen. What I mean by this is, not extracting from the brood-chamber, as some do. In the meantime, if I am very busy, I put on the third super, and work them as I do Nos. 1 and 2.

In extracting, the honey is put in an open-headed barrel, covered with screen-wire; this takes all the pieces of comb and bees out, and keeps out flies and bees, and does not hinder evaporation. The barrel is exposed to the sun and air. The impurities arise to the top, and the honey is drawn out at the bottom of the barrel.

MANAGING THE INCREASE.

I will now give my method of increase, which, if not directly, is indirectly connected with this way of obtaining extracted honey. I will also state that my bees did not attempt to swarm more than three times during 1889, and two of those swarms issued from one hive. Now for the plan of increase:

There will generally be two or three combs in the centre of the super next to the brood-chamber, which will be partly filled with brood; these I remove to the nucleus hives, prepared for the purpose, putting three or four frames in a hive, with enough bees to keep the brood warm. This nucleus I build up as fast as possible, so as to have a full colony by the time the fall flow begins, so that they may fill their hive for winter, and they frequently store considerable in the super. By this means, I have nearly all the old bees at work during the honey-flow, as many of the old bees will leave the new, just-formed nucleus hive.

Now for the results: I began the year of 1889 with 16 colonies, and worked 14 for extracted honey. I increased them to 40, took 2,000 pounds of honey, and they have yet an average of at least 25 pounds each. We had a frost in May that killed all the linden bloom, and injured other flowers considerable; also a very dry fall, cutting the fall crop off short in September — altogether not making more than about two-thirds of a crop.

Besides this, I have had a great many combs built, and have considerable surplus beeswax—enough to keep me in foundation. These last two items cannot be realized in the production of comb honey. I can sell my honey very readily at 9 and 10 cents per pound—while comb honey sells at 10 to 12½ cents.

Glendon, Iowa.

HIVE-SWARMER.

Self-Hiving Arrangements and their Originators.

Written for the American Bee Journal

BY HENRY ALLEY.

Being interested in "hive-swarmers," I must say that I am much amused at the claims of priority of invention by several who have now come forward to share in the honor of having been first "in the field" with a swarmer.

How is it that those who have invented these wonderful things, have kept them from the public eye so long? Why did they not, long ago, bring them out, and not wait for others to do so, and then come forward and claim all the honor of the invention? Instead of putting their inventions to practical use, after having used the swarmers one year, they cast them aside, never to be brought out again until some one else was found who had a better device. This coming in at "the eleventh hour," and claiming all the honor and profits, is hardly the thing.

Some of the claimants for the honor of the invention of the swarmer do not really know what became of their wonderful inventions. They had used them; hung them up in some out-of-the-way place, and that is all they seem to know about it. O, they were great things—worked finely! but of no consequence to the bee-keeper till they thought some other person was likely to make something out of it.

I must say that I admire the disposition of Mr. Stephens (see page 70). He says, "In the summer of 1888, I invented and used the same device (as Mr. Alley's). My tube was made of screen-wire," etc. That is just where the thing is wrong, and is unlike mine. Years ago I tested the screen-wire business, and found it was not the thing; it would not work any better in my apiary than it did in Mr. Stephens', aud that is why Mr. S. and I cast it a side.

Notwithstanding the fact that I do not connect two drone-traps with screen-wire to construct a swarmer; and notwithstanding the fact that I spent my time in testing the different materials to use for a passage-way to conduct a queen from one hive to another when a colony of bees swarm, a person now comes forward to claim all the honor of my invention!

Considering the fact that Mr. Stephens used his device one season, and having found it impractical—as impractical it is, if constructed as described by Mr. S.; and, also considering the fact that Mr. S. does not give one instance where his swarmer ever hived a swarm of bees, though he and several well-known and reputable parties watched it, I must say that his claims for an equal division of the honor and profits in my swarmer are quite moderate!

Now, if I say that a patent for a swarmer was granted a man more than three years ago, Mr. Stephens may modify his demands made upon me for a divison of the spoils.

Not only has one patent been granted for a swarmer, but another party has had claims in the Patent Office over three years, for a patent on another swarmer. This is rather discouraging news to all those who claim to be the *first* inventors of self swarm-hivers.

It is queer that all those who have described their swarmers in these columns, entertain the idea that I never saw a swarmer until this winter! What a queer idea!

It will not be out of place here for me to say that all swarmers, thus far described, infringe the patent which I hold on the drone-and-queen trap. The principle for which letters patent were granted in the year 1884, is not changed by the slight changes in the construction of the trap.

Now about the practicability of swarmers: None of those who claim the invention of swarmers, dared to describe them in the bee-papers, for the reason that not one of them, after testing, were found of any practical worth. The screen-wire used to connect the two hives did not work satisfactorily; that is, I found it so, and no doubt others found it the same. The wire-screen destroyed the connection between the bees and queen, after she had entered the new hive. The perforated metal furnishes a continuous passage-way from the home hive to the empty hive, for the bees to enter the new hive when they swarm and return in search of their queen. Most readers can see that there is a great difference between using screen-wire and perforated metal, when applied to a swarm-hiver.

Wenham, Mass.

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Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as any story. Price, $1.00.

An edition in strong paper covers is issued for premiums. It will be mailed as a present to any one who will send us *two* new subscribers to either the Bee Journal or the Illustrated Home Journal.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Feb. 19-20.—Ohio State, at Cleveland, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 19-20.—N. E. Ohio, N. W. Pa., and Western New York, at Cleveland, Ohio.
Geo. Spitler, Sec., Mosiertown, Pa.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Bees are Booming—Cedar Bloom

The weather has been so mild this winter that vegetation is growing like it does in the spring—red clover was in bloom on Christmas. Bees are fairly booming, and have been carrying in pollen since Jan. 10. I have 30 colonies in good condition, some of which are working as strongly as if in the midst of a honey harvest. Bees are now at work on cedar blossoms—something that I never noticed before. I do not know whether they get nectar or pollen from them.
E. W. Powers.

Palmyra, Mo., Feb. 3, 1890.

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The Golden-Rod Did Well.

We have no reason to complain of the honey season of 1889, but everything to be thankful for. We hope that 1890 may be another big bee-year. I did not get as much honey as some of my neighbors, as I was working for increase; but some of my colonies gave 160 pounds each, and 12 of the best colonies gathered 10 pounds each of golden-rod honey, and I left considerable honey with the rest of them.

Tiverton, Ont. Matthew Allison.

◆

Golden-Rod Honey—Swarming.

I notice that one correspondent says, on page 58, that he does not think "there ever was an ounce of golden-rod gathered." As I am one that has reported honey being gathered from golden-rod, I suppose, in his opinion, I and others who have reported securing honey from golden-rod, must be mistaken. I cannot account for the different reports, except from the difference in location. I kept bees for twelve years in Iowa, and I never knew them to get any honey from that source there; I have kept bees seven years here in Missouri, and I know whereof I speak, when I say that bees gather honey from golden-rod here. They do not get it every year, but some years we get a good surplus from it. I have seen the bees very thick on it—from one to six or eight bees on one stalk, and they were bringing in the nice, golden-colored honey fast from it, and not from asters, as one correspondent claimed.

Another correspondent claims that Mr. Doolittle is wrong in his opinions in regard to giving swarms a frame of brood to prevent absconding. I came to the same conclusion as Mr. Doolittle has, years ago, and have not for years practiced it. There are other good reasons against this practice, as well as its failure to prevent swarms from absconding. Still another corresrondent claims that Mr. Doolittle's plan of forming nuclei does not work with him. Now I must say that I think the fault is with the correspondent instead of the method, as I have practiced it a good many times, and always with success. It would be easy to make a failure, if you should happen to get the queen from the hive where you got the bees for the nuclei; the result would be, that when you give them a queen (thinking they had none) she would be destroyed.
L. G. Purvis.

Forest City, Mo., Feb. 4, 1890.

[The letter from Mr. Ira Reeves was published on page 58, while we were confined to our bed, as announced in these columns. Had we been able to reply, one would have followed the letter. Mr. Reeves certainly *could not* mean to record anything more than the observations of himself and his neighbors *in that locality*, and while the golden-rods yield honey in many localities, we are well aware that in other places they have often failed to do so. This will explain the position taken by Mr. Reeves.—Ed.]

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The Dibbern Bee-Escape.

Being much interested in the bee-escapes receiving so much attention at the present time, I obtained the latest invention of Mr. Dibbern. I could not quite get the idea from the illustration on page 798 of the American Bee Journal for 1889. Perhaps I am a little dull in that direction. I have the device now. I am not in the habit of praising things before a trial, but from what I know of the habits of bees, and judging this device theoretically, I believe it will work. The beauty of it is its idea of practicality. No, that is not all, because the escape is beautiful in design and in workmanship. It will evidently work on any kind of a hive. A circular hole of the proper diameter, is all that is needed to affix it to a honey-board or cover that has a bee-space above and below.

Since the escapes are so inexpensive, they will certainly be thoroughly tried the coming season. If this will work successfully between the brood-chamber and the extracting-super in the fall of the year, when bees so *stick* to their combs, I shall feel like Sancho Panza did when he blessed the man who invented sleep. Mr. Dibbern has given us an idea that is worthy of a patent. Many simpler articles have been patented, and that he has donated the idea to the fraternity, should not tempt us to filch the product of his genius.

Forest City, Iowa. Eugene Secor.

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Self-Hivers—Carniolanizing Bees

Do you publish a German edition of the American Bee Journal? I prize the Bee Journal very much, and do not intend to be without it as long as I keep bees. I commenced last spring with one colony of Italians, that I bought the summer before; they swarmed once, and I took 120 pounds of honey in two-pound sections, mostly white clover, but some of it was from golden-rod and aster. I bought 3 more colonies in the fall, and all of them have plenty of honey—enough to carry them through the winter, unless we have too much warm weather. They were flying on Jan. 28th and 29th, being the first time they had been out since Nov. 6, although the winter had been very mild up to about the middle of January.

I heard of very much the same kind of a self-hiving arrangement as Mr. Alley's, several years ago. A German here kept bees in the old country before he came over, five years ago, and he says that they used the same device there before he left. If I have time I shall try Mr. Dibble's plan described on page 72, the coming summer. It is much simpler than Mr. Alley's, and I think that it is much better. Will Mr. Dibble please answer this question: How would it do to use a strip of queen-excluding honey-board on the front of the hive, in place of the honey-board under the frames?

When is the best time to Carniolianize my bees, by introducing a queen? How would it do to destroy all queen-cells in the parent hive, immediately after swarming, and then send for a queen and introduce her? G. D. TOLMAN.

Shawano, Wis., Feb. 3, 1890.

[We do not publish a German edition of the BEE JOURNAL. To do as you suggest will be all right about introducing a Carniolan queen.—ED.]

A Very Rainy Season.

We have had more rain here this season than people can remember of, that have been here for 12 or 15 years. I expect a good honey harvest this year.

C. SCHLIESMAYER.

Pasadena, Calif., Jan. 25, 1890.

Poor Season for Bee-Keeping.

The honey crop was almost a failure last season—it was the poorest season in this locality for honey and increase that I remember of for 25 years. I have 100 colonies, all in good condition. I put them into winter quarters on Nov. 28, 1889.

M. SNYDER.

Berne, N. Y., Jan. 30, 1890.

Japanese Buckwheat, etc.

The bees had a general jollification to-day, flying as briskly as in spring—a gentleman driving to my house was in fear of having his horse stung; I think that his fears were unfounded, however, as the bees seemed too much absorbed in their pleasures, to show any displeasure at the approach of any one. The lack of snow is destroying great quantities of clover. I would recommend the sowing of Japanese buckwheat, which proves a great yielder of both grain and honey the last season.

S. J. YOUNGMAN.

Lakeview, Mich., Jan. 21, 1890.

Some Experience—Honey-Trees.

Last spring I bought 2 colonies of bees, and one cast 2 good swarms in May, and the other did not swarm at all, but I got 165 pounds of surplus honey from it, besides storing plenty to winter on. The colony that swarmed stored about 45 pounds, and the 2 new colonies stored enough, with what the mother colony stored, to make 265 pounds of surplus honey in all. One of the new colonies cast 2 swarms, which stored plenty for the winter. I sold enough honey to pay for the 2 old colonies, and had all the honey we could eat all summer and fall. I have nothing on the farm that has paid me better for the capital invested, than did those 2 colonies of bees, and now I have 6 colonies in winter quarters, and the temperature in the bee-cellar has been between 36 and 42 degrees above zero; the past two or three days, at from 36 to 38 degrees below outside, and at the same time it was 36 to 38 degrees inside. I am afraid my cellar will get too cold, if this cold weather lasts much longer.

I have one-half acre of Alsike clover, which bloomed last summer for the first time, and I never saw bees work on any blossoms as they did on that. I shall sow more of it in the spring. I think that if all bee-keepers would sow some honey-producing plants, such as Alsike, white clover and buckwheat, and would plant plenty of basswood, soft maple and box-elder trees, they would not have to report so many failures of the honey crop. If bees pay at all, I say, give them plenty of pasturage, and they will give still greater returns to the apiarist. I have about a dozen basswood trees in a grove near the house, which I planted ten or twelve years ago; they have produced blossoms for three years, and I never saw any basswood trees in their native woods that bore such a profusion of blossoms; besides, I planted at the same time 100 or more soft maples and box-elders, which give the bees something to work on; I also have thousands of white willows planted, which furnish the bees with pollen and honey very early in the spring. It pays to raise honey-producing plants and trees. D. B. CASSADY.

Litchfield, Minn., Jan. 21, 1890.

Wintering Nicely—Alsike Clover

Bees in this locality are wintering nicely, so far. They had plenty of natural stores, but gave us but little surplus. I have 26 colonies packed in clover chaff, and on the summer stands. Which is best for seed, the first, or the second, crop of Alsike clover? WM. G. CORY.

Cason, Ind., Jan. 27, 1890.

[Alsike clover ripens in the latitude of Chicago, in the latter part of July, but need not be cut until August, if the weather should be unfavorable. The crop of seed is always obtained from this cutting, in which respect it is unlike the common red. It is not advisable to cut this clover more than once each season, but it may be pastured moderately during the fall. When cut for seed, it may be threshed from the field with a common clover machine; but, if more convenient, it may be stacked and threshed during the fall or winter.—ED.]

Winter Stores—Digested Nectar.

My bees have had a jolly time to-day, so I took off the covers and gave them an airing, and I think that it did them good. We have had so much rain that the chaff was a little damp, but the sun dried it out nicely during the day. I examined 3 colonies, and found they were rearing brood very fast—too much so, I think. I am of the opinion that bee-keepers will have to do a good deal of feeding this spring. My bees have consumed nearly half of their winter stores, already. Talk about wintering a colony on 20 pounds of honey! My bees have used that amount up to this date; but of course we have had an unusually warm winter, which accounts for it. There seems to be more bees in the hives now, than there were last fall. I would like to hear something more about "digested nectar;" it seems to me that somebody ought to *know* whether honey is digested nectar or not. My simple opinion is, that there is nothing digested about it. If it is digested, it seems to me that the water that there is in nectar would be absorbed so that the bees could cap it as fast as gathered.

ORVILLE JONES.

Stockbridge, Mich., Feb. 3, 1890.

Straining Extracted Honey.

In the "prize essay," on page 52, by Dr. G. P. Hachenberg, he speaks of straining honey. I got sick of straining honey through a cloth the first year I extracted honey. When I extract honey, I put it into alcohol barrels as fast as it comes from the extractor; when one barrel is full, I let it stand a day or two, and every impurity in the honey will come to the top, when I skim off all that I can get. When I sell it, I melt it in a boiler, and skim it again, and there will not be a speck of anything in it. The way I strain the cappings and skimings is as follows:

I make a box about 14 inches square, and about that high, and nail slats on the bottom, with a very little space between. I make a platform of boards high enough from the floor, to put tin pans under the lower side to catch the honey, making the back higher than the front. I lay the boards double, and break joints, put the box on with the front side raised a little from the boards, to let the honey out; fill it up with cappings, and when I have any skimmings, I put that on top, and the honey will drain out clean. I put the honey that drains out, into the barrel that I am filling from the extractor, and it will all be skimmed together. In that way my honey is as clear and nice as can be, and it is a great deal better way than straining through cloth.

Averill, Mich. CHARLES INMAN.

Wintering Well—Binders.

Up to this date I have never known bees to winter so well—indeed, they have had but little "wintering" to do. It has been incessantly warm, and the bees have been almost constantly on the wing, bringing in pollen, and the last few days they have stored some honey. They are building comb and breeding rapidly; a peep into the brood-chamber presents the appearance of the height of the breeding season. Thousands of brood in all stages, from the egg up to the hatching bee, and in one of my strongest and most thrifty colonies, I noticed (to-day) a queen-cell started—I suppose, under the impulse of swarming.

I received the binder you sent me a few days ago, and in a few minutes after its reception, with the assistance of my "better half," I had 52 copies of the AMERICAN BEE JOURNAL (for the year 1889), in a solid, well-bound book, which I esteem as one of my most valuable bee-books.

The bee-keepers of this (Mecklenburg) county, contemplate at an early day, the organization of a bee-keepers' association.

E. W. LYLES.

Charlotte, N. C., Jan. 28, 1890.

[Bee-keepers should always bind their numbers of the AMERICAN BEE JOURNAL. It is handy to always have them in order, and it saves them from being lost, to file every one as soon as it comes to hand. The pleasure of reading and referring to articles is worth more than the Binder costs.—ED.]

Bees Wintering Fairly.

My bees appear to be wintering fairly, though they have not had a flight for some time. I feared they would have a hard time this winter, when, last September, I saw their hives containing considerable fall honey and honey-dew, which could not be extracted on account of its consistency; but at present I am encouraged. I must say that I agree with all contained in Dr. Tinker's article on page 73, about "Double-Walled *vs.* Single-Walled Hives;" though the Doctor puts some points rather strongly.

J. H. LARRABEE.

Larrabee's Point, Vt., Feb. 4, 1890.

Poor Honey Crop—Golden-Rod.

The past season was rather discouraging for a beginner in this locality. I started in the spring with 13 good colonies, increased them to 26, and took only 300 pounds of comb honey. The basswood on the low land was all killed by frost. The golden-rod has never produced one pound of honey for me, as it grows all around my house, and myself, wife and two boys have watched it for two seasons, and never saw a bee on one bloom yet. Our main honey-plants here are, sweet clover, wild cucumber, heart's-ease and buckwheat. The AMERICAN BEE JOURNAL is a very valuable paper for the bee-keeper, and I will never be without it while I keep bees.

JOHN GOFF.

Deloit, Iowa, Jan. 30, 1890.

Bees Afflicted with Diarrhea.

My bees are in the cellar, and have the diarrhea badly, some hives being spotted as badly as any I ever saw. The temperature has not been below 45 degrees, and has been kept below 45 and 52 degrees, so it surely must be bad food. There was considerable honey-dew here last year. If the spring is late and unfavorable, the loss may be frightful.

B. H. STANDISH.

Evansville, Wis., Jan. 30, 1890.

Gathering Pollen all Winter.

I have 8 colonies of bees in the cellar, and 8 on the summer stands; they have been flying every two or three days, all winter. Yesterday they were bringing in pollen from the red maples, and they have been getting it since Christmas, which means *brood*, if I know anything about bees; and brood at this time of the year, with a two weeks' shut up, means diarrhea and death, I believe. That is the way this winter is going to serve us.

THOS. THURLOW.

Lancaster, Pa., Jan. 28, 1890.

Getting Honey from Golden-Rod

Mr. Ira Reeves seems to entertain no very high opinion of his brother bee-keepers' powers of observation, as he says on page 58, that he does not believe there "ever was an ounce of honey gathered from golden-rod." He may be correct, as regards his own locality, but that does not prove that every one else is mistaken, as he seems to think. I might with equal propriety say that because I have never seen the Mississippi river, I do not believe there is any such river in existence.

Wilmington, Vt. E. C. BOYD.

The First Year's Results.

I began bee-keeping last spring with one colony, which I bought for $4.00. They were an extra-strong colony of hybrids. I increased by dividing, early in May, about a week before a cold snap of about two weeks came on; I thought then that I had made a mistake in dividing them so early, but both colonies had good queens, and the hives were filled with bees by the time clover began to blossom. As soon as the honey began to come in, I put on supers, and kept the bees busy by having plenty of sections for them to fill, although I did not give them too many at once. The new colony afterward cast a swarm, making 3 colonies, which, altogether, stored 300 pounds of as nice comb honey (mostly in one-pound sections) as ever was put up by the bees. My bees were very good honey-gatherers, and built very straight combs, but they were the crossest bees I ever saw so I concluded to Italianize them, and in August I obtained three fine Italian queens, which I successfully introduced, and now I have 3 colonies of handsome Italian bees. I left them on the summer stands, and they are wintering finely. I left about 30 pounds of sealed honey in each hive, which will more than carry them through the winter. I use the standard Langstroth hive, and I think that it is *the* hive. I like the BEE JOURNAL, and feel well acquainted with its correspondents, although I have never met many of them.

ROBT. WALSTROM.

Lake City, Minn., Feb. 3, 1890.

Everything Lovely in Texas.

My 80 colonies of bees are in fine condition. Young bees are hatching by the thousands. We have had the mildest winter I ever saw—in fact, December and January have been more like March and April. Wild peach, elm, and fruit-trees are in full bloom. Farmers are preparing to plant corn; birds are singing as though it was really April; and bees are now tumbling into the hives, loaded with both honey and pollen, as though the fate of nations rested upon their speed. Drones are flying from some colonies. Surely, the Gulf Stream has changed its course, or we may have winter yet. Horse-mint—our main honey-plant—never looked finer, and there is plenty of it. Grass looks as green as a wheat-field, cattle are fat and sleek, and men are going in their shirt sleeves.

W. S. DOUGLASS.

Lexington, Tex., Jan. 25, 1890.

HONEY AND BEESWAX MARKET.

DENVER, Jan. 27.—1-lb. sections, 13@15c.; Extracted, 7@8c. Beeswax, 20@25c. Market well supplied. Demand moderate.

J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Jan. 25.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.

CLEMONS, CLOON & CO.,
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CHICAGO, Jan. 22.—We quote: White clover 1-lbs., 11½@12½c.; 2-lbs., 10@11c. Basswood 1-lbs., 10½@11c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.

R. A. BURNETT, 161 S. Water St.

DETROIT, Jan. 24.—Comb honey is quoted at 12@14c. Sales slow. Extracted, 7@8c.—Beeswax, 24c.

M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.

BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON,
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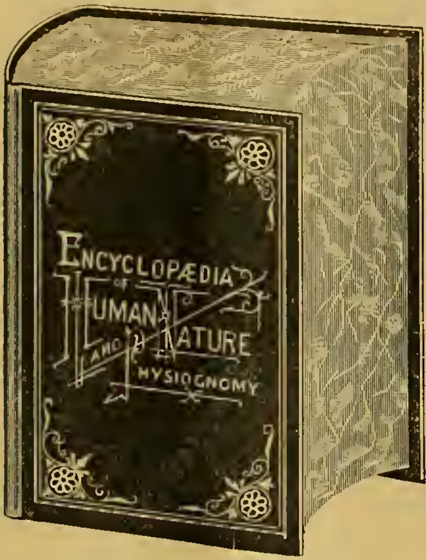

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The Report of the proceedings of the 20th annual session of the International American Bee-Association is now published. The price is 25 cts., postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

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Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, *Sec.*

☞ The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, *Sec. and Treas.*, Bedford, O.

☞ The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890.
GEO. SPITLER, *Sec.*

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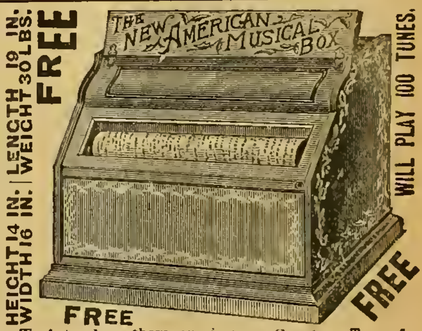
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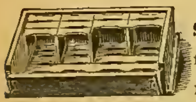

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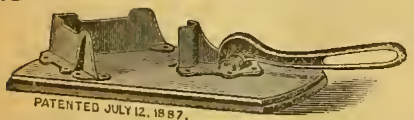
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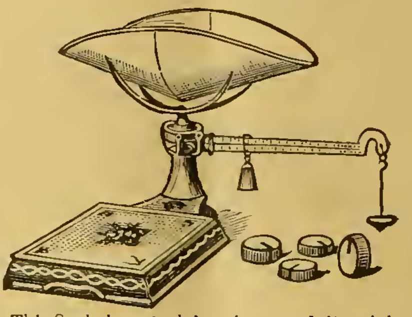

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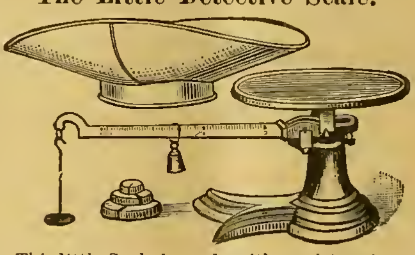

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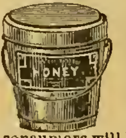

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CIRCULATES
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PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Feb. 22, 1890. No. 8.

EDITORIAL BUZZINGS.

☞ The *Prairie Farmer* is publishing Lizzie Cotton's advertisement. Mrs. L. Harrison should give the editor of the *Farmer* a lecture on *frauds*. P. J. England, of Fancy Prairie, Ills., sent us a marked copy of it.

◆

☞ We have given more than the usual space this week to convention reports. Those who are interested, like to read about them as soon as possible after they are held; and as they present the *freshest* news of the pursuit, all our readers will appreciate their early publication.

◆

☞ We have received a very neat Programme of the Ohio State Convention to be held in joint session with the North-eastern Ohio, Northwestern Pennsylvania, and Western New York Association, held at Cleveland, O., Feb. 19 and 20. The topics discussed, led by essays from prominent bee-keepers, were numerous and varied, and we have no doubt of its having been an interesting meeting. We expect to publish a good report very soon from the efficient Secretary, Miss Dema Bennett, of Bedford, O.

◆

Do Not Stand in your Own Light.—This is what friend Alley says about the Honey Almanac, in the *Apiculturist* for February, which, by the by, is an excellent number, and full of valuable information:

> How many of our readers ordered one hundred or more of Brother Newman's Almanacs? If you have not bought a quantity of them and distributed them in your neighborhood, you stand in your own light. A cheaper and more effectual way of advertising your honey about your home cannot be devised.

Apicultural News from Germany.—The Rev. S. Roese, of Maiden Rock, Wis., has translated the following items of interest from the latest periodicals from Germany:

> The January number of the *Deutsche Bienen-Vater aus Boehmen*, brings the sad news of the sudden death of Pastor A. Schmidt, of Mekle, President of the Central Verein of German bee-keepers in Bohemia. President A. Schmidt was born Jan. 13, 1846, in Saaz, Germany, and served [aside from his ministerial duties] with energy and faithfulness in the cause of apiculture. On the evening of Dec. 4, 1889, President A. Schmidt, manifested great cheerfulness at a social entertainment, and on Dec. 5, at 8 a.m., he was found a corpse in his bed at the parsonage, caused by congestion of the brain. The sudden death of this great man, who was much beloved by all bee-keepers far and near, is much mourned over. Officers and members of the various bee-keepers associations, sections, etc., followed the deceased to his last resting-place, on Dec. 9, at 10 a.m., at Saaz, his birthplace.
>
> Pastor Weygant's new method of artificially heating bee-houses, causes great excitement among German bee-keepers.
>
> The watering of bees during their long winter confinement, has been, by the majority of German bee-keepers, declared unimportant—50 against 2.
>
> Pastor Weygant, last summer, gave a five days' course of free lectures on bee-beeping at Flaeht, in Germany, to about 60 interested listeners; from tender youth to those having silver-mixed hair, were seated at this Gamaliel's feet, to receive instructions, and Mr. Kellen, editor of the Luxemburgh *Bee-Gazette*, declares him a second Dzierzon.

◆

☞ The Indiana *Farmer* of last week contains the following concerning the bees in that State:

> A bee-keeping neighbor at Irvington told us last week that his bees were quite lively, bringing in pollen and honey from the soft maple buds. He also said that the colonies were in remarkably healthy condition, owing to the mild winter, and will be able to do good work this spring and summer.

And if spring dwindling is not severe, we may look for a good crop of honey next season; for the condition of the bees in Indiana, is but a sample of their condition all over the Northwest.

◆

☞ The California *Farmer and Dealer* has changed hands and form. The February number contains 24 pages and cover, is nicely printed, and brimful of choice reading matter for the farmer and dealer, on home, horticulture, and business. It is published at 109 California Street, San Francisco, Calif.

◆

☞ F. A. Lockhart, residing at Lake George, N. Y., writes as follows:

> The Almanacs I received of you were just splendid. When I distributed them, I sold $50.00 worth of honey in one day! I credit half of this to the use of the Honey Almanacs.

◆

☞ The Queen of all bees is the husking-bee. You can tell her by her "red ear."

They all Took It.—A very enthusiastic admirer, and esteemed correspondent, of the BEE JOURNAL, kindly offered to represent it, and take subscriptions, at a recent State bee-keepers' convention. The pleasing results of his canvass he tells in the following paragraph, which, at the same time, shows how the AMERICAN BEE JOURNAL is regarded in at least one State:

> I asked permission to say a few words in favor of the AMERICAN BEE JOURNAL at the convention, but the President told me in advance, that I would not get a single subscriber, as they all took it. He gladly gave me the opportunity, but the result proved him to be a true prophet.

◆

Honey and La Grippe.—Dr. A. B. Mason, of Auburndale, O., on Feb. 13, 1890, writes as follows:

> I copied your article, "Honey for *La Grippe*," on page 35, and handed it to the *Toledo Blade*. It was in the next day's paper, and before night some of the neighbors were here after honey for their *Grippe* ones. It made quite a demand for honey. As I furnish news items for the *Blade*, it did not occur to me to sign my name. If I had, I guess I would have got rid of all my surplus.
>
> I have not had *La Grippe* yet; and this reminds me. There are five in our family. We have honey on our table at every meal, and two of us eat of the honey at nearly every meal, and the other three seldom eat of it. The three abstainers have had *La Grippe*, and the other two have not.

◆

Honey Almanacs.—Rev. S. Roese, of Maiden Rock, Wis., thus gives his experience in using the Honey Almanacs:

> My experience in retailing honey shows that the Honey Almanac is doing a great work. One family, where I left honey and an Almanac, sent word to me to send more honey, as it had proved of great benefit as a medicine in the family; the children troubled with worms were relieved; and the head of the family, who had suffered so long from constipation, was helped at once. To-day, the Rev. J. Barker, of the Baptist Church, to whom I sent a small jar of honey for his cough and cold, called at my house and purchased 30 pounds of honey, stating that it not only helped his cold, but relieved his lung complaint, constipation, etc.

◆

☞ The Canadian *Bee Journal* is in the future to be published each alternate week with the Canadian *Poultry Journal*—making each an independent semi-monthly, with premium at $1.00 a year. We are glad to see the two papers separated. Experience proves that the papers devoted to two pursuits, and published in one, are not satisfactory. Both papers will be sent to one address when required at the same price as now—$1.00 a year. We wish our Canadian cotemporary success in the "new departure."

◆

☞ Mr. George Hilton, Fremont, Mich., has been very ill for some time, but he is now convalescing. We hope for a speedy and full recovery.

QUERIES and REPLIES.

Methods Used to Prevent the Swarming of Bees.

Written for the American Bee Journal

Query 688.—Which do you find the best plan to prevent swarming—giving abundant room by tiering one set of combs above the other, or giving the necessary room below, all on one level? Or what other preventive do you use?—England.

Give room above.—A. B. MASON.

Extracting is the only effective method that I have tried.—R. L. TAYLOR.

By putting one set of combs above the other.—H. D. CUTTING.

Tiering up above. Giving room below, or on one level, is not practical, though it is practicable.—DADANT & SON.

I think it is about six of one and half-dozen of the other, as to which plan is used.—J. P. H. BROWN.

The upward tiering-plan, as you describe, increasing the storing-room to the capacity of the colony.—J. M. HAMBAUGH.

Either plan works well for extracted honey. Neither will secure the desired result, when working for comb honey.—G. M. DOOLITTLE.

Tiering is, in my judgment, the better of the two. It would take too long to describe other methods and devices that we practice.—MRS. L. HARRISON.

I never had any success with either plan. Keep the queens' wings clipped, and destroy all queen-cells as long as the swarming-fever lasts.—P. L. VIALLON.

Why try to prevent swarming at all? You can keep them back for a time, by giving plenty of room, either at the top or the sides, if given before they start queen-cells.—C. H. DIBBERN.

I have never used the second plan mentioned. The first succeeds in perhaps one-half of the number tried. If tiered up at just the right time, swarming is controlled in a majority of cases.—EUGENE SECOR.

I find the best and only satisfactory manipulation to prevent swarming, in the divisible brood-chamber, and worked by alternating the upper and lower halves of that brood-chamber—of course, always furnishing plenty of surplus room at the same time.—JAMES HEDDON.

I do not know how to prevent swarming. Increase of room for the queen will help, I think, and I do not think that it makes any difference whether you give her room by tiering up, or spreading horizontally.—C. C. MILLER.

Giving room below seems most effective; but "tiering up" is most useful to the keeper of bees. The successful bee-keeper studies to attain what *he* wants first. What the bees want, is a secondary matter.—J. M. SHUCK.

If combs are to be built by the bees, room above the brood-nest will be more effective than below. An upper story from which the honey is extracted as soon as it is sufficiently evaporated, and abundant ventilation, will generally prevent swarming. I have found ventilation at the top of the hive, of great advantage.—M. MAHIN.

I am careful to "tier up" as fast as the increasing colony needs the room. No neglect is admissible at this time. The "tiering" is all done above the brood-department of the hive, until a swarm issues; if the top tiering does not prevent swarming entirely, then I tier downward; that is, I place a super with combs, guarded with a metal queen-excluder, below the brood department, and send the swarm back home. This management separates the queen from the old brood department, and compels her to commence anew below.—G. W. DEMAREE.

A combination of both; but I find the best plan is that of close-working frames in the brood-chamber, only bee-space apart. This plan prevents swarming, and the building of bridge-combs; and also forces the bees into sections, as soon as they are put on.—J. E. POND.

Much room by tiering up tends to restrain swarming. With the best hives, it is impossible to give room horizontally, and I do not think that it would be any advantage if we could. I once used the long [New Idea] hives, and could not see that they were an advantage. Removal of the queen is the best way to certainly prevent swarming.—A. J. COOK.

A large, roomy hive is the best preventive against swarming, next to the frequent use of the extractor. The room should be given *above the brood, always*; for it is the instinct of the bees to store there, and they do so to the best advantage. If plenty of empty combs are placed above the brood on all hives, there will be few swarms that will issue, even in a good honey-flow.—G. L. TINKER.

Either plan will give relief to the colony, and sometimes prevent swarming—but neither can be relied upon at all times to keep the colony from sending out a swarm.—THE EDITOR.

Using Sections After the Honey Has Been Removed.

Written for the American Bee Journal

Query 689.—Will it pay to use sections the second time, or after the honey has been taken out, provided they are clean and sound?—E. C.

Yes.—C. C. MILLER.

Yes.—M. MAHIN.

Yes.—J. M. HAMBAUGH.

Yes! YES? YES! Always!—G. M. DOOLITTLE.

Yes, if they are clean and sound.—R. L. TAYLOR.

No, sir, not if you are going to sell the honey. I doubt if it will pay, anyway.—JAMES HEDDON.

Ordinarily, it will not; but if they are clean and sound, it will.—MRS. L. HARRISON.

Yes, if they *are* clean and sound; but they never are.—J. M. SHUCK.

If perfectly clean, they are just as good as new; but if soiled, they might better be thrown away.—EUGENE SECOR.

Certainly. Some such were exhibited by Mr. H. D. Cutting, at the last Michigan State Bee-Keepers' Convention, and looked as good as new.—A. B. MASON.

Why not? Though usually it does not pay to bother with old sections.—A. J. COOK.

No. After sections have been used once, they never can be made to look as neat and as clean as new ones.—P. L. VIALLON.

Yes, if they are neat and clean. If filled with comb, shave it down so that the cells will be only about ½-inch deep.—C. H. DIBBERN.

If they are clean, use them. As many manufacturers of sections are now making them "just for the fun of the thing," it will not pay any one to use a soiled section.—J. P. H. BROWN.

Yes; use sections as long as you can keep them clean and nice. Why is not one clean, nice section, just as good as another?—J. E. POND.

If they have been used in wide frames, they will not be soiled, and may be used again; especially the partly-filled sections at the close of a honey-flow.—G. L. TINKER.

It may pay, but if they have been used more than once, they are usually too much soiled for a first-class appearance. That is one of the stumbling-blocks of comb-honey production.—DADANT & SON.

In the first place, "they will not clean." If you just want them for your own use, they will do; but if you expect to sell the honey, do not use them.—H. D. CUTTING.

It pays me well to use them, since learning somewhat more how to manage them. The honey is not quite as nice as that in newly-built combs, but the quality can be improved by leaving the sections on the hives until the nectar is thoroughly evaporated. If this is done, the nectar will keep as well as any.—G. W. DEMAREE.

We doubt whether it would not cost more to make them "clean and sound," than they are worth. They cost so little that we do not think it would ever pay to use them a second time.—THE EDITOR.

Bees Dying in the Cellar.—W. W. Parker, Sechlerville, Wis., on Feb. 10, says:

I have 19 colonies in the cellar; the winter has been so unusally warm that it is impossible to keep them quiet, consequently there are lots of dead bees, both in and out of the hives. Would it better their condition to take them out, put them into a larger box, and fill in with chaff? Or is it less risk to let them alone?

W. W. PARKER.

By request, Dr. C. C. Miller answers Mr. Parker's questions as follows:

A warm time is rather a trying time in the cellar. I am inclined to believe that I should try to keep them in a little longer, if they can have good air in the cellar. Open the windows and doors at night, so that they will be thoroughly aired, whenever it is warm enough so that it does not cool the cellar too much; and it may be well even to let the cellar remain open in the morning until the bees trouble by flying out. I have sometimes put ice in the cellar, toward spring.—C. C. MILLER.

☞ Frank Vincent, the well-known traveler, author of the recently published book, "Around and About South America," and of a forthcoming work on Central America, furnishes an elaborate leading article on "The Republics of Central America," in the March number of "Frank Leslie's Popular Monthly." Guatemala, Honduras, Salvador, Nicaragua and Costa Rica are graphically described, with numerous and beautiful illustrations, making a contribution of the highest intrinsic interest, as well as of peculiar timeliness in connection with the work of the Pan-American Congress. Other illustrated articles offer attractions in a variety of directions.

The Most Vivid and startling pictures of the terrible tragedy in Washington, which resulted in the death of two of the members of Secretary Tracy's family, are found in "Frank Leslie's Illustrated Newspaper" this week. Other pictures include one in reference to Gen. Sherman's seventieth birthday.

CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey as Compared with Honey in the Comb.

Written for the American Bee Journal
BY G. W. DEMAREE.

Take into your mouth a piece of newly-built honey-comb, as white as the virgin snow, in which no nectar has been stored, and you will find it as tasteless as a piece of blotting-paper; and I imagine that few people would be inclined to swallow the one substance more readily than the other. Virgin wax is tasteless—why, then, eat wax?

If we trace the history of honey, we find that the ancients used it not merely as a condiment, but as "meat" —a substantial food. "Have ye here any *meat?* And they gave him a piece of a boiled fish, and of an honey-comb." "And behold there was a swarm of bees, and honey in the carcass of the lion; and he took thereof in his hands, and went on eating."

From the glimpse that we have into the customs and habits of the ancients, we judge that honey was eaten from the hands, as a general thing, though perhaps not always; and this custom, of long standing, gives us a clue to the prejudice in favor of honey in the comb. If honey is to be eaten from the hands, then there are good reasons why it should be taken in the comb, because the comb is not only a receptacle to hold the liquid honey, but the wax, in eating, acts mechanically to retain the sweet on the palate, and makes the eating more pleasurable.

But customs have changed in these modern times, and men take their meals differently from what they did in the ages of the past. Honey, as a rule, is eaten with bread, and the wax is entirely superfluous, the bread performing the mechanical part in delaying the delicious sweet on the palate. The long-standing habit of eating honey from the hands, is the true clue to the prejudice in favor of honey in the comb.

Another reason—and perhaps the chief of all the reasons for the prejudice against honey extracted from the combs—is connected with the fact that previous to the invention of the honey-extractor, there was no method known by which the pure honey in its virgin state could be separated from the combs, free from all foreign matter.

It is a well-known fact that combs of honey are likely to contain more or less of "bee-bread" (pollen), and may sometimes contain young bees in the larval state. Any process of expelling the liquid honey from the combs by *pressure*—by whatever form brought to bear—the bruised and broken combs are bound to part with some of their impurities, together with the liquid honey, which impurities mix with, and become a part of, the honey. Hence the just prejudice against the "strained honey" of the long ago.

IMPORTANCE OF THE HONEY-EXTRACTOR

The centrifugal honey-extractor of modern invention, entirely overcomes the foregoing objections. By the use of this machine, the liquid honey is discharged from the cells by centrifugal force, leaving the more solid impurities in the unbroken cells. By this process, the honey in a liquid state is obtained in its immaculate purity.

What a boon to the health and welfare of the human race is the centrifugal honey-extractor! Honey, taken by this process, is the pure, God-given nectar of flowers gathered and stored by the bees, and evaporated in the hives by currents of heated air kept in motion by the fanning wings of the inmates of the hive. No chemical poisons are needed, or used, by the bees to purify the products of the hive, as is the case in the sugar refineries—hence, pure honey, taken by the process which I have described, is the purest and the best, and the safest sweet used for food by the human race.

Honey is a combination of sweets, and has non-drying qualities not found in the chemically-prepared sugars; and hence it has no equal as a sweetener in the culinary arts, and as an adjunct to bread, it is the most pleasing and healthful sweetener in the world.

GRANULATION OF EXTRACTED HONEY.

Nearly all pure honeys have a tendency to become solid—granulate or candy—upon the approach of cold weather; and this fact is received with well-nigh universal regret, on the part of honey-producers, and those who handle the article in the markets. I now regard this as a very great mistake. It is nothing more than a question of convenience.

For a time the writer himself participated in these regrets, because of the inconveniences attending the practical handling of the article in its solid state; but after discovering that the consumers of the article in the bounds of my trade do not object to the candied state, but are more than pleased with it; and after a close and careful study of the nature and composition of the pure nectar of flowers, evaporated to the honey state by the bees, and also partially by artificial means; having before me samples of honey taken each season for ten or twelve years past, from which to take observations while practicing my studies—I discovered that the best grades of honeys tend to solidity most rapidly, and such honeys endure length of time with the least perceptible change in body and flavor. This being true, the fact that honey solidifies as the temperature lowers, is not only not a thing to be regretted, but is a blessing, though it be a "blessing in disguise" to those who have not gone below the "crust" in their investigations.

Owing to peculiar properties in honey, it maintains a higher temperature by reason of latent heat, than does the body of air with which it is surrounded; but the latter is subject to more rapid change of temperature, hence the disposition of honey to yield up its moisture to the air, or absorb it therefrom, governed wholly by variance in temperature. In the light of these facts, it requires no very profound reasoning to bring one to the conclusion that the "solid state" is the best possible natural protection to honey against atmospheric influences.

I conclude, then, that the natural tendency of honey to become solid—granulate or candy—should be accepted as a matter *in course*, and the minds of bee-keepers should be directed towards the best methods of handling and popularizing the article.

Christiansburg, Ky.

VERMONT.

Report of the Vermont Bee-Keepers' Convention.

Written for the American Bee Journal
BY J. H. LARRABEE.

I send a report of the recent Bee-Keepers' Convention, as reported in the daily *Free Press and Times*, of Burlington, Vt. We did not affiliate with the International, but I hope that we will do so next year; also I hope to bring about a fuller report of the extent of bee-keeping in the State of Vermont, by means of blanks, to be distributed to all bee-keepers, through the Vice-President in each county. But progress and improvements are hard to bring about in the face of such poor seasons, as we Vermonters have had to endure for three or four years.

The report to which I refer, is condensed as follows:

The Vermont Bee-Keepers Association met at the Van Ness House at, Burlington, Vt., on Tuesday, Feb. 4, 1890. The convention was called to order at 1:30 p.m., by President R. H.

Holmes, of Shoreham, and the Secretary, J. H. Larrabee, read the minutes of the last meeting and the new Constitution, which was adopted at the meeting held at Middlebury last year.

The appointment of committees resulted as follows :

Committee on nominations : Addison county, V. V. Blackmer ; Chittenden county, George Beecher ; Lamoille county, J. W. Smith.

Committee on exhibits : Franklin county, F. M. Wright ; Washington county, H. W. Scott ; Rutland county, H. L. Leonard.

Committee on resolutions : Miss M. A. Douglass, Miss Lottie L. Crehore, and T. S. Warner.

"Management of bees during swarming," was the subject of the first essay, by V. V. Blackmer, of Orwell, who gave his personal experience in hiving swarms. In the discussion which followed, Mr. Manum gave some interesting information in regard to the control of swarming bees, his method of clipping the wings of queens calling forth questions from several members.

Mr. O. J. Lowrey, of Jericho, being absent on account of sickness, his essay on "Metallic honey-boards," was omitted, and the President called for remarks on the subject, and Messrs. Wright, Cram and Smith responded.

The essay on "The rearing and shipping of queens," by A. E. Manum, who is an enthusiast in the business, called forth an interesting discussion in which the speaker made some interesting answers to questions.

"A book of chronicles," by Miss M. A. Douglass, of Shoreham, was an interesting history of the organization and perfection of the Vermont Bee-Keepers' Association, as evolved from the Addison County Bee-Keepers' Association, organized at Middlebury, in 1875.

The last feature of the afternoon session was an address on "The chemistry of honey and other sugars," by Joseph L. Hills, State chemist. Mr. Hills introduced the polariscope, and gave an exceedingly interesting description of the composition of sugar and honey. At the conclusion of the address, a vote of thanks was unanimously passed by those present.

The subject of the incorporation of honey among the products placed on sale by the Board of Trade was introduced by the President, and at 4:20 the convention adjourned till evening.

An informal canvass among the members present during the intermission, showed that quite a number of bee-keepers in this State were producing from one to eight tons of honey ; and that there was a decided opinion in favor of making a strong effort to incorporate honey among the products put on sale by the Boards of Trade. Storage at a temperature of 90° is necessary for the storage of honey.

THE EVENING SESSION.

The convention was opened at 7:20 p.m., by the reading of reports of Vice-Presidents.

The first essay of the evening, on "Honey-packages," gave some valuable hints in regard to putting up honey, and the kind of packages which would cause the most ready sale in the market. Miss Crehore, in an able and exceedingly business-like manner, told how she marketed honey, and the remarks that followed showed that she certainly understood her business.

Mr. Ferguson, Secretary of the Vermont Board of Trade, introduced the subject of placing honey upon the Board, and some spicy remarks were made by Mr. Davis, of Bradford, in regard to the manner in which the producer of honey is beaten out of his profits, by the commission houses of the larger cities. The discussion then became quite animated.

Prof. G. H. Perkins, State entomologist, with the assistance of a microscope and a diagram, gave an interesting informal talk on the "Bee and its insect enemies." At the conclusion of Prof. Perkins' address, the convention adjourned.

SECOND DAY.

The morning session opened with the report of the Secretary, which showed the association to be in a flourishing condition. The Treasurer's report showed a balance in the treasury, and all debts paid.

The committee on nominations reported the following officers, who were elected :

President, V. V. Blackmer, of Orwell ; Vice-Presidents : F. H. Walker, of Manchester ; D. S. Hall, of South Cabot ; J. E. Crane, of Middlebury ; B. P. Greene, of St. Albans ; H. L. Leonard, of Brandon ; J. W. Smith, of Stowe ; M. F. Cram, of West Brookfield ; A. J. Albee, of Derby ; J. D. Goodrich, of East Hardwick ; George Beecher, of Essex ; and Secretary and Treasurer, J. H. Larrabee, of Larrabee's Point.

Mr. H. D. Davis discussed "Wintering, and the influence of the 'Pollen theory ;'" explaining his success in wintering bees. He claimed that the pollen soured, if it became damp, and therefore must be kept dry. He turns the brood-chambers upon end in wintering, thereby gaining a deeper brood-chamber, in accordance with nature.

MANAGING THE INCREASE.

The consideration of "The control and prevention of increase" was then taken up.

Miss Lottie L. Crehore, of Bradford, illustrated her remarks on the subject by the use of a swarming device, consisting of a brood-chamber attached to one side of a hive. She regulated the increase as she desired, by changing to new brood-chambers. The brood-chambers contain eight frames each, and nine days after the first swarm issued, four of the frames in the old brood-chamber were put into another brood-chamber, upon which other swarms were hived. By means of this device, the bees are driven back into the hive, and an increase is prevented.

Miss Wolcott, of Shoreham, was the next speaker. She said that when fine queens issued, new colonies were formed to the best advantage. By having the queens' wings fully clipped in the spring, and cutting out queen-cells, the issue may be readily regulated, and entirely prevented if no cells are overlooked.

M. F. Cram, of West Brookfield, used the more common methods of regulation, which consist of simply going to the hive before the bees swarm, taking away the queen, and then allowing no queen-cells to hatch. The subject was then generally discussed.

BEE-MATTERS OF INTEREST TO ALL.

In relation to saving queen-cells from desirable colonies, Mr. Holmes said that he would allow no cells to hatch till enclosed in a queen-nursery.

Miss Crehore, in answer to a question, said that she did not use comb over three years old.

Mr. Davis, of Bradford, said that he could not use the comb long, because there would be too much pollen in it.

Mr. Manum and Mr. Cram said that they were troubled with too little pollen.

Mr. Davis thought that there was a difference in localities in relation to pollen.

The best way to dispose of partly-filled sections, Mr. Wright said, was to extract the honey and keep the comb for another year.

Mr. Manum said that it would not be profitable for a bee-keeper who had 50 colonies, to make his own foundation. He thought that Italian bees swarmed more than black bees.

Mr. Wright said that if a man had time, he could make his own supplies profitably, but if he had other work, it would be cheaper to buy them.

Mr. Manum thought that it would be profitable to buy bees, and hire a man to care for them, judging from his experience ; but he would not advise a man to do so who had no experience. He thought that one man could manage 300 colonies.

Various speakers said that the best kind of fuel for smoking was poplar planer-shavings and rotten elm. The Bingham smoker was generally preferred.

Mr. Wright preferred the Italian bees to the blacks, as he found them the most hardy.

The fact was developed that Mr. Holmes completed at this meeting his fifth year as President of the Association, and his services have been fully appreciated by the Association.

The Association adopted resolutions thanking those who had addressed the convention, the Van Ness House, and the railroads, for courtesies extended, and expressing faith in the future of the industry.

Miss Douglass, for the Committee on Resolutions, submitted a proposition for the offering of premiums aggregating $50, at the State Fair, for the exhibition of honey and bee-keepers' supplies, with special judges.

Mr. Larrabee said that the State Fair, at his suggestion, increased the premiums on honey last year to $25.

Mr. Manum said that the sum named in the proposition was not enough, and an amendment offered by Mr. Wright, was adopted, increased the sum to $75, and the resolution was passed. At the proper time the matter will be laid before the managers of the State Fair.

The time and place of the next meeting is left, by the Constitution, with the Executive Committee and officers.

The convention then adjourned, *sine die.*

BASSWOOD.

Some Important Apicultural Problems—Golden-Rod.

Written for the American Bee Journal

BY S. J. YOUNGMAN.

One problem in relation to our favorite occupation is no sooner solved than another serious one stares us in the face. The one I refer to as settled, is the wintering problem, which seems to be simply a matter of conditions in which the bees and their stores should be, at the approach of the winter. A hive properly constructed so as to retain all heat generated by the bees, with packing-material of any kind to also retain all heat and to absorb moisture, and allow the same to escape—this will keep the bees as warm as they possibly can be, supplied by their own heat only, and quite dry, which is undoubtedly a necessary condition for their health and general welfare.

With the foregoing conditions complied with, the presence of pollen need not be feared, but, on the contrary, it will be a blessing to the bees. As the bees cannot gather pollen enough in this latitude, in the months of March and April, to supply their needs in breeding, consequently I consider a certain quantity of pollen a necessity, if early swarms and populous colonies are desired for the fruit and white clover blooms.

I might outline the causes of bee-diarrhea, which I will admit is sometimes indirectly caused by pollen, but when the conditions are right for diarrhea, the bees would not be *safe* by the *absence* of pollen. I think that all the above conditions of wintering, etc., are known and recognized by nearly all professional bee-men, but some of these hints may be of help to some of the beginners, of whom there are a vast number—what a pity that they do not all take the AMERICAN BEE JOURNAL!

DESTRUCTION OF BASSWOOD TREES.

I will now syeak of the impending danger to our industry, spoken of in the opening of this article, namely, the destruction of our basswood timber. My bee-keeping friends, this is a very serious evil, that is fast crowding itself to our notice, and calls for the united action of the bee-keeping fraternity in all quarters of our land. The uses of this timber are various; a large number of small trees are cut for staves, even as small as 8 inches in diameter; but it is a shame that such trees should be cut, and no man in the least interested in bees, should allow the trees of such size to be cut, if in his power to prevent it.

But what is denuding our forests of this timber the most, is the manufacturing of sections. Why cannot the bee-keepers agree to not use sections manufactured from linden, but insist upon having them of spruce and poplar, instead. In this locality, in an early day, the basswood was nearly, if not quite, the only source of honey. (I speak of a time when the bees were in a wild state, and the forest covered all the land; of course our honey-flow is not restricted to the basswood now—the clovers and wild asters yield great quantities of nectar, but nothing will ever take the place of the beautiful linden, as a honey-producing source.)

GOLDEN-ROD AS A HONEY-PLANT.

I have always hunted wild bees as a pastime, and although several varieties of the golden-rod grow here in great luxuriance, it has been seldom that bees have been seen on this beautiful plant.

The golden-rod may be entitled to the proud distinction of being the "national flower," on account of its being so widely distributed over the whole country, and for its proud and stately beauty; but it should never hold that place on account of its honey-producing qualities, for there are many flowers that will discount it in this respect. The buckwheat is of far more importance as a nectar-bearing plant, and the wild asters can always be relied upon through the severest drouth, and after frost has destroyed all other honey-producing plants.

Lakeview, Mich.

INDIANA.

The Report of the State Bee-Keepers' Convention.

The tenth annual meeting of the Indiana Bee-Keepers' Association, convened in the State Agricultural Rooms, on Wednesday, Jan. 15, 1890, at 1 p.m., and was called to order by the President, Dr. E. H. Collins.

The President's Annual Address

President E. H. Collins delivered his annual address, from which the following extracts are taken:

The study of apiculture during the past 10 to 20 years, has been of unusual interest; because, in it, as in other occupations, the growth of invention has been very rapid and encouraging. The introduction of Italian queen-bees into American apiaries has passed away, and the business has found its legitimate work of furnishing bees and queens and other supplies to the trade, and producing honey for the market.

The honey-flow during the past three seasons has been quite discouraging, so much depends upon climatic conditions. We have passed through two years of drouth and one of cold and wet, yet it is noticeable that where good management prevailed, the yield was generally remunerative. Suppose the circumstances connected with honey-production were to be perfect for a few years, what would be the result? The market would be flooded, and prices ruined, and with this would come sluggishness and decay. But these ever varying conditions constitute a complicated problem, which necessity compels us to solve, and in the solution of which lies the pleasure of pursuit and the enjoyment of attainment. Protect your colonies, and an increase of honey will be the result.

According to the researches of A. I. Root, the following statistics are obtained:

Well-informed bee-keepers lost about 9 per cent. of their colonies, while others lost 17 per cent. The cool weather of June and July prevented bees from breeding, and the excessive rains washed the honey from the flowers; yet in spite of this, the yield was about 76 per cent. of the crop, being 50 per cent. better than in 1888. In 1880 our State had 146,000 colonies, and produced 1,097,000 lbs. of surplus honey; but the winter of 1880-81 killed half the bees, which reduced our surplus to 690,000 lbs., making a difference in the two crops of 407,000 lbs. These were very extreme changes.

The yield of 1887 was 1,624,000 lbs.; in 1888 the number of colonies increased, but the yield was reduced to 923,000 lbs.—the effect of dry weather. Pay more attention to packing bees for winter; be more thoughtful about taking honey too close, and increasing too fast. The majority of our winter losses come from diarrhea and starvation.

Our exhibit at the State Fair was creditable, although not as large and impressive as becomes our State. If we ask for more space, we can get it. The business of bee-culture is increasing; every farmer's family has a member who could learn to handle bees. Farmers are advised to grow small fruits—why not produce their own honey? Finally, attend all agricultural societies, for it pays to attend them.

E. H. COLLINS.

BEST METHOD TO GET COMB HONEY.

This subject was ably presented in a well-prepared essay by Geo. C. Thompson, of Southport, Ind., in which he said:

"My method is the result of careful study. To secure a large crop of comb honey, we must have strong colonies. The hive must be full to overflowing with bees. A weak colony may give fair returns of extracted honey, but will not work in the sections so as to be profitable. Construct the hive so as to be easy of access in all parts at all times, and capable of being contracted or expanded at will, as circumstances may demand. The surplus cases should be easy of manipulation. The colonies must be kept strong during the entire year; swarming must be prevented, for, when bees swarm, they do not store as much honey as those which do not swarm."

PREPARING HONEY FOR MARKET.

This was the subject presented by G. H. Hornbuckle, of Glenn Valley, who said:

"First convince the purchaser that it is pure, and just what you represent it to be, as honey is no new article. We must educate the people as to how honey is produced, and from what kind of flowers the best honey is gathered. I find honey on market that people condemn, and should not be put on the market. At home is the place to establish a market. Never put honey in the hands of commission men. If our people were more educated on the honey-question, we would find a more ready sale. Extracted honey is better than that in the comb."

Action was taken to prepare for a better exhibit at the State Fair, and to secure more and better arranged room.

During the three sessions, a number of essays were read and discussed with much interest. A part of the discussion was too theoretical, as usual, but a number of practical workers from the field, gave us much accurate information on the details of successful management. How easy it is, when a stranger begins to speak, for one of experience to tell whether he is a practical bee-keeper or not. Very often the first sentence betrays him. Theory, unless based on experience and simply reaching into the future to pave the way for experiment, is undesirable in any such meeting. It is not worth a cent. But I must not be misunderstood. The convention was not burdened with it more than such meetings usually are, while one member after another arose promptly, and told his method, and why it succeeded well with him.

At recesses and intermissions, between sittings, the audience was chatting freely on various topics of common interest, and were slow to leave the house.

A communication from Mrs. Wycliffe Mason, spoke of Mr. Mason's recent death, of typhoid fever. Mr. Mason was a prominent member of the society.

Every essay on the programme was read, their being no failures, and a few volunteer essays were offered.

Officers were elected for the ensuing year, as follows: President, E. H. Collins; Vice-President, Ora Knowlton; Secretary, Geo. C. Thompson; and Treasurer, J. M. Hicks.

The following Committee on Programme was selected: Mrs. C. Robbins, and Messrs. Knowlton, Henderson, Myers and Wilson.

The programme for the next meeting devotes the first session to an object lesson adapted to juvenile bee-keepers' by our worthy Secretary, Geo. C. Thompson, in which he will open a hive and show his method of manipulation, and his arrangement of the honey-board and sections. The programme in full will soon be published. It will include exhibits of samples of honey and honey-plants, also supplies, etc., with a list of essays by practical bee-keepers.

Although we had a very pleasant reunion, and made many new and desirable acquaintances, we expect next winter's meeting to be the largest and best this Society ever held in Indianapolis. The stenographer's report of the meeting will be printed in the State Agricultural Report.—*Indiana Farmer.*

NEW YORK.

Report of the New York State Convention.

The New York State Bee-Keepers' Association began its first session of the 21st annual convention, at 2 p.m., on Feb. 5, 1890, in the Supreme Court room, at Rochester, N. Y. About 50 well-known bee-keepers of the State were present.

President P. H. Elwood called the convention to order, and the Secretary, George H. Knickerbocker, read the minutes of the last meeting. Considerable time was consumed in receiving new members.

METHODS OF REARING QUEENS.

A short essay presented by G. M. Doolittle, on the "New methods of queen-rearing," was read by the Secretary. The essay was merely suggestive of questions relating to queen-rearing. The methods of rearing queens over a queen-excluding honey-board were suggested. Some still claim that queens shall be reared by the swarming system. Mr. Doolittle did not wish to advise the use of the larval system, but he wished to call out a discussion on this point.

President Elwood thought that better queens could be obtained from natural cells, than in any other way. By the other methods, satisfactory queens could be obtained. if pains were taken in selecting the larvæ.

Mr. Doolittle finally said that "when the Creator put the bee in the world. he placed it there under the same conditions as other beings—that is, with the instruction to increase and multiply. The rule of "the survival of the fittest" reigns in the bee-family. The results were, that we had the very highest quality of queens until man stepped in, and tried to improve upon the Creator's method.

T. H. Cyrenus said that if the same care was taken, and the bees given the attention, under the force method, as under the natural method, satisfactory queens might be obtained. He did not consider queens thus obtained, so hardy, however.

Mr. Doolittle said: "Upon the queen depends all there is in bee-keeping. If you are going to scrimp anywhere, do it some other way than on the queen. You cannot rear a bee or produce a pound of honey without the queen. When this fact comes to be recognized, bee-keepers will find themselves more successful." He also said that the small cells were apt to hatch first; and the large ones produce the best queens. This was why many destroy the small cells.

Another question brought up was, if there really was such a thing as an "eight-day queen." Opinions were divided on this subject; the President thought that a queen hatched in much less than ten days, was the result of bees consuming the oldest larvæ. Bees hatched from old larvæ always give much trouble.

EVENING SESSION.

The evening session was opened at 7 o'clock, with a discussion on the question of how to best secure reduced freight rates on honey. The one great trouble in shipping honey, it was developed by the discussion, is the carelessness of the freight-handlers. Mr. Dickinson thought that a shipper should personally superintend his own shipments. From the discussion, it would seem that the Inter-State Commerce Commission is not very popular with the honey-producers. It is impossible to secure reduced rates. Mr. Dickinson thought the Commission was appointed in the interests of the railways, instead of the shippers.

As a result of the discussion, a committee consisting of O. L. Hershiser, C. G. Dickinson, and W. H. Dodge, of Charlottle, Vt., was appointed to confer with the Northwestern Bee-Keepers' Society, in regard to taking steps to secure reduced freight-rates.

The question, "Has it paid honey-producers to buy Italian and other imported queens?" was discussed in an essay by Ira Barber. In the absence of Mr. Barber, the essay was read by the Secretary. Mr. Barber had a good word for the Italian queen. He thought that she had a good influence, and was perfectly satisfactory.

NEW RACES OF BEES.

Secretary Knickerbocker next read an essay on "The new races of bees." The Syrians were the first dealt with. While Mr. Knickerbocker had a good word for the imported bees, he closed with this bit of advice: "In these times of close competition, low prices, and uncertainty in the honey crop, my advice is, that if you have a good working colony of bees, you should not 'fool' away your money in securing fancy, new and untried races of bees."

An interesting discussion followed Mr. Knickerbocker's essay, "My opinion is," said Chester Olmstead, "that if we took as much pains with the black bees, as with the Italians, they would be more profitable. I find the Italians altogether too liable to swarm."

Mr. Ashby preferred the brown bee. He did not like black ones. Italians, he thought, needed less food for winter than the blacks. The blacks' doing so well in honey-gathering, had mystified him.

Mr. Dickinson thought it was strange that Italian bees had been cultivated here for 28 years successfully, and that bee-keepers were just coming to think them worthless. "A cross is better than a thoroughbred," said he, "for practical purposes. One thing in favor of the Italian queen is, that you can find her when you want her. A black queen cannot be depended upon; she does not stay at home and attend to business. The Italian queen does not wander more than half a mile from home, and it does not take more than an hour to find her."

Mr. Hershiser said that he believed a race of bees given to swarming, if properly cared for, was more profitable as honey-producers. That was why he liked the Italian bees.

Mr. Cyrenus said that as far as money was concerned, the Italians had never helped him out. On the other hand, if the blacks had been given the same care, as to their fine points, as the Italians have had, they would have improved as much as the Italians have.

Speaking on the matter of improving bees, Mr. Betsinger said: "I do not believe there has been, in the past forty years, what can be called 'improvement' in either the Italian or the black bees. It is the bee-keepers, and not the bees, that have improved."

President Elwood said that he believed there was as much difference between various Italian bees, as between Italians and blacks. No one race would succeed in all parts of the country. In short yields of white honey, the hybrids were superior; for gathering buckwheat honey, he thought that the black bee was superior to the Italian.

An adjournment was taken at the close of the discussion, to 9 o'clock the next morning.

HIVING BEES.

An Experience with a Swarm on a Stump-Root.

Written for the American Bee Journal

BY D. CHALMERS.

On the morning of Aug. 16, 1889, about 9 a.m., I was busy in the harvest-field pulling peas, when a Mr. Erb came to me, and after the ordinary greetings, he informed me that two days previous, he had found a swarm of bees on a stump-root, which he wished me to go and hive for him. I told him that I doubted very much whether there would be any bees by this time, on the stump, but he assured me that there were.

He told me that he got a couple of young lads (sons of an old fogy) to try and hive them for him, on the day he found them, but it baffled their skill.

To understand the position of the bees, the reader will have to imagine a large pine stump, about 2½ feet in diameter, all charred, and left standing above ground by forest fires; one of its largest roots shot out in a northerly direction for some distance, and then formed two, each branch being about 3 feet long, and their ends were about 18 inches above *terra firma*. On the extremity of one of these roots the bees are supposed to have clustered, as that is where Mr. Erb found them, and when he called in the lads, they brought an old basket-hive with them, which they tried to force the bees to inhabit.

The honey-gathering insects were developed by a kick on the root, and took "the drop" all right, but would not enter the basket "worth a cent," but, instead, kept re-clustering, and the would-be bee-men took them by handfuls, and slammed them on the ground in front of the basket hive, killing many, and irritating the survivors, as myriads betook themselves to stinging both the operators and Mr. Erb.

All attempts to hive the bees proved futile, and had just to leave the bees where found, but charged Mr. Erb 50 cents, to purchase whisky to drive the poison out! So Mr. Erb came to me two days later, very anxious that I should try my skill, and was willing to pay me for it. I thereupon tried to scare him by refusing to leave the harvest-field for less than 50 cents (as the bees were all of three miles away); but he at once accepted my offer.

Then I said to him that it was nonsense, at that time of year, to think of bees starting on nothing, and be able to build enough comb and store sufficient honey to winter on. Mr. E. said that he could not afford to buy anything to help them, and I then offered to furnish a hive and enough combs, from which I had recently been extracting, and if the bees lived until next summer, he could pay me for them; but if, on the contrary, they should succumb, I would take the articles back.. He considered my offer—all that he could wish for—and off we started for home, and collected (as I thought) every requirement for the occasion, and were soon at the stump, where, sure enough, we found the bees still clinging to the charred root (strange to say, they had no comb formed), but had moved back into the crotch.

After placing the hive as near the cluster as possible, and arranging a cloth between them, with a wing I lifted several detachments from the cluster, and dumped them near the entrance; I then applied smoke to the remainder, which would only take wing, and re-cluster, although I believe that most of them visited the hive, but only to fill themselves with honey from the moist combs, and hurry out to soar aloft again, and seemed refreshed for a further journey. All the while it required a free use of smoke to keep them off the root from which they had so recently been driven, and which Mr. Erb had begun to chop off.

There was a strong west wind, which tired the bees, and drove them back a few rods; and while the writer plied the axe, in turn with Mr. E., the latter went to see what the bees were about, and, upon his return, he told me that they were clustering in the grass. I then carried the hive over and placed it near them for the second time, and got the first sight of the queen (I had, until then, feared that she had come to an untimely end). Every inducement was offered her for a comfortable home, if she would only enter and take her family along; but no, she would only run about on the cluster. Her wings were large and strong, but I judged, by her appearance, that she was a fertile queen, so I caught her by the wings with my right thumb and forefinger, and then entrapped two of her legs between the corresponding members of the left hand, and turned her back downwards, until her wings were almost touching the top of the hive, and with the small blade of a pocket-knife, I cut her right wings off, and placed her near the hive-entrance, but she had no more thought of entering than before; she tried for considerable time to fly, but her efforts were in vain; so after she had reached quite a distance from the hive, I again showed her the entrance to the hive, which she readily entered, and the bees, for the first time, began to go in.

At this juncture, Mr. Erb remarked how quietly they had behaved all the time, but questioned if "I didn't charm them." But a few minutes had elapsed when they were almost all in, when we filled the entrance with grass, and soon had them in a suitable place hard by Mr. E's house, when the grass was removed, and the subdued bees liberated.

After dinner, the hive was opened, and the queen was soon found; the combs were quickly adjusted, and covered up, and instructions given to Mr. Erb, to feed a little sugar syrup every evening.

The bees had not been at liberty more than thirty minutes until several could be seen about the damp pump-platform. The water must have been for their own immediate use, as there was no brood of any kind in the hive, not even an egg.

At the time the bees were hived (Aug. 16), the honey-flow of the season was just opening from swamp flowers, and in less than three weeks Mr. E. was after me to go out and see the bees again, as the combs (10½x13 inches), he thought, were full. I purposed going to see them sooner on the queen's account, fearing lest I had mistaken her fertility; but when I went, I was delighted to find that they had an abundance of honey to winter on, and brood in all stages—of course, none would be matured until the three weeks were up.

I also found queen-cells with eggs in them; this I did not like, but destroyed them, and kept my thoughts to myself, but in reality I considered, by what Mr. E. told me at first, of the handling the bees had received, that the queen had been hurt, and that she now was about to be superseded; and on Oct. 28, my fears were realized, when Mr. Erb told me that he had found the queen-bee carried out, dead. At that time we had a cold spell, with a hard frost, but I promised to go and see his bees on the first fine day; my promise, however, was not fulfilled for two weeks, when I expected a big search for a virgin queen, but I was agreeably surprised to find a fine young queen doing duty, and the colony in prime condition for winter.

Poole, Ont.

MICHIGAN.

Report of the Northeastern Michigan Convention.

The eighth annual meeting of the Northeastern Michigan Bee-Keepers' Association, was held in the Council Chamber, in Lapeer, on Wednesday, Feb. 5, 1890. The President called the convention to order, and the programme then followed:

Mr. R. L. Taylor, of Lapeer, Mich., delivered the following

President's Annual Address:

You have come here to listen to and take part in discussions upon subjects pertaining to apiculture, and presuming that you would prefer, even in a President's address, something relating to that subject, rather than matter of mere congratulation and condolence, I shall devote the time I occupy principally to the former.

You might have been surprised, if you had chanced to call on me last Thursday or Friday, at seeing me carrying bees out of the cellar to their summer stands, because I have always advised leaving bees, in a cellar, undisturbed till the winter was over. Two facts have moved me to take this new departure, viz: The almost unprecedented mildness of the season, and the uneasiness of the bees. There was, as yet, no appearance of disease, but it seemed impossible to get a temperature such as to prevent the bees of many of the colonies from unduly wasting. It was easy to see, from the eagerness with which the bees took wing, and from the spotting of the covers of the hives in their flight, that they at least thought it a good thing. Were they right?

But I mention the matter more particularly to point a lesson. We must not forget that general advice is given, and rules are laid down, to meet ordinary circumstances; when extraordinary circumstances come in, common sense must be given free play to formulate new rules, if necessary. In bee-keeping, circumstances alter cases so frequently that, to be a successful apiarist, one must be full of resources to adequately meet new contingencies. Unthinking stolidity, at least, is sure to fail.

Early in October, in order to determine the amount of stores possessed by each colony, I weighed each hive. Out of curiosity, I last week weighed a number of those removed from the cellar, and found that they had lost, generally, from 7 to 9 pounds each, though some were found which had lost much less. I judge that not more than half the loss had been incurred while they were in the cellar.

HOW TO FIND THE QUEEN.

Some may have noticed that I lately promulgated what was (to me) a new method of finding queens. I notice some one claims that it is not new; but whether it is or not, it has not been much practiced nor extensively known. It will be found a wonderful relief when queens are to be found in strong colonies, especially when bees are inclined to rob. I think it should be known by every bee-keeper, so I give it briefly here:

If the hive to be operated on is not already provided with a queen-excluding honey-board, and a super of some kind, provide it with them, and in any case see that they are loose, so that they may be quickly removed. Now, with the smoker well equipped in one hand, and a small stone in the other, kneel by the side of the hive, knocking leisurely on the rear end of the brood-chamber with the stone, for about 2 or 3 minutes, during which time, at regular intervals, puff 6 or 8 strong blasts of smoke directly into the entrance of the hive; then quickly remove the super and the honey-board, turning the latter bottom side up on the ground in front of the hive, when you will find the queen among the bees on the honey-board.

If you are not successful at least almost every time, be assured either that your eyes are not trained to recognize the queen readily, or that you have not followed carefully the directions.

SOME APICULTURAL ITEMS.

I noticed last autumn that my bees, during their last flights, spotted their hives somewhat. Was that any indication of poor stores, or of a poor condition for successful wintering?

We are confronted by a fact, and not a theory, in the condition of our honey markets. We had a poor crop, and yet honey is a drug at low prices. Is this condition of things owing to the mild weather, to the hard times, or to over-production? The crop is barely 2 pounds *per capita* of our population. Do we not fail in getting it sufficiently within reach of the people?

Like all things mundane, we have found that bee-keeping moves in a circle; now it is at the zenith, now at the nadir, and, with most of us, it is slow in passing this lowest point. But I have faith in the future. All things are his who only waits. The ascent is again begun. Discouragement is unprofitable, even in a financial point of view. Let us be prepared to make the most of "the good time coming." There is yet a call for the exercise of all our abilities to compel the choicest favors of Fortune.

It is now, if I mistake not, 7 years since our Association was organized. For a local society, when we consider the frequent lean years latterly in bee-keeping, we have enjoyed very pleasant and profitable annual gatherings. I hope for, and expect, an increasing interest in this Association. Michigan is noted for its bee-keepers. Our State bee-keepers' association is recognized as the leader of its class. There is no reason why our Northeastern should not—if it does not already—stand next to that of the State Association. These meetings are pleasant and profitable in more ways than one. Each one should do something to add to their interest. Every one can ask questions, and they are a very effective means of arousing discussion and eliciting information. R. L. TAYLOR.

Following the President's address, the first subject discussed was,

FOUL BROOD AMONG BEES.

The nature of this disease attacks the young brood before it is fully hatched out; it is also very contagious, increases with great rapidity, and soon destroys the whole colony, unless a remedy is applied. There is also danger of transferring the disease from one colony to another, by diseased combs.

A cure for this troublesome disease can be effected by simply shaking the bees into a clean hive, with only foundation, or empty frames, and no comb in it; this effects a cure, so far as the bees are concerned; then put the hives, and everything about them, into water, and boil them thoroughly. This will make the cure sure.

The next subjects considered were the following:

SPRING MANAGEMENT—RACES OF BEES.

In this matter it was agreed to better protect the bees in early spring-time, by packing the hives in saw-dust, shavings, or something similar until settled warm weather is assured.

The races of bees mostly in use now are known as the Italians, hybrids, blacks, Carniolans, Syrians and Cyprians. Some prefer one, some another. Italians are gentle, cling to the combs well, and are good honey-gatherers. They are excellent where the honey-flow is not abundant.

Blacks are good workers in an abundant honey-flow, and of little account unless such is the case. They build the straightest combs and store the whitest honey, and they build their combs more readily. They are irritable and easily shaken from the combs.

Some hybrids are a cross between the Italians and blacks, and have the good qualities of both, but are very irritable, and must be handled with care.

Carniolans are much like the blacks, except that they are quiet and gentle, and cling to the combs better.

Syrians, in appearance, are like the Italians—yellow bees—and have most of their good qualities, except that they are irritable, and do not yield readily to smoke.

VARIOUS BEE-KEEPING QUESTIONS.

"How do you determine when a colony is queenless?" The best way to tell is, by the shape of the capping to the honey. The caps will be of oval shape, rather than flat; by the uneasiness of the bees in the hive; by the bees coming out at the entrance of the hive and looking about, as if in search of something; bees set up a humming and shaking of their wings—then, last but not least, remove the frame and look into the hive.

"How can we keep honey out of the brood-nest?" Give the bees plenty of room in the supers; also, have a little black "blood" in the bees.

"The prevention of robbing:" Close the entrance to give passage but for a single bee at a time. This is effective, if the bees will defend themselves; if not, remove them to a cellar for a few days, then place them on a new stand, or exchange places with the colony that is the robber.

"Keeping comb honey:" Put in a dry, warm place, with a uniform temperature — the warmer, the better. Eighty degrees is a good warmth.

"The utility of wooden combs:" Their use was considered doubtful as to any advantage to be derived.

"Spraying fruit trees:" It should not be done until the blossoms are dropping off, or otherwise it might possibly injure the bees; besides, there is no advantage to be gained as far as the fruit is concerned. It is rather a loss of labor and capital.

The following officers were chosen for the coming year: President, Hon. R. L. Taylor, of Lapeer; Vice-President, G. W. Baldwin, of Port Huron; Secretary, W. Z. Hutchinson, of Flint; and Treasurer, W. E. Gordon, of Unionville.

It was decided to hold the next annual meeting at Port Huron, Mich., the first Wednesday of February, 1891.

The members were entertained at supper at the residence of Hon. R. L. Taylor.

The evening session consisted of a non-conventional discussion, after which the convention adjourned, the members being pleased with the day's deliberations.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.60**, if the order is received at this office by March 31, 1890—when this offer will end, the regular rate being $1.75.

Postal Notes are no safer to use in letters than bank bills. Any one can get the money on them. A Money Order can be obtained at the post-office or at the express office for 5 cents (only 2 cents more than a Postal Note), and is perfectly safe; if lost it can be re-issued.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Appreciates Our Journals.

The American Bee Journal I cannot do without, and the Illustrated Home Journal is what one needs in a family; there is no trash in it, and no demoralizing stories, long or short, to do harm to those not having tastes formed, or not yet able to discriminate between what ought, and ought not, to be read. I have discontinued one paper that is highly spoken of, and substituted the Illustrated Home Journal, which, at its present standard, is excellent.

T. F. Kinsel.

Shiloh, O., Feb. 10, 1890.

Bee-Keeping in West Virginia.

I started in the bee-business in 1888, with 7 colonies of Italian bees, and have increased them to 19. Last year was a very poor one here; there was a great profusion of white clover, but it was so very cool and wet during fruit-bloom, and most of the summer, that my bees did scarcely any good. I had to feed them 200 pounds of sugar and honey. So far they seem to be doing nicely; although this has been an exceptionally warm winter, they do not seem to consume much stores. I have chaff hives, altogether, and therefore I winter the bees on the summer stands. I expect to give the dove-tailed hives a trial the coming summer, if the season admits. I am very much interested in the discussions concerning the thick top-bar; I have never tried it, but will do so as soon as it becomes settled—if in its favor. I use the standard Langstroth frame. We are expecting a better season this year.

S. Ray Holbert.

Clarkson, W. Va., Feb. 10, 1890.

Carniolan Bees—Selling Honey.

Last June I sent for a Carniolan queen, and put her into a queenless colony; in two weeks I opened the hive, and found every comb full of brood. I thought then that I had the bees that would do me some good in the future. They were good workers. I put on the surplus case, and they went to work in it. In the fall, when honey commenced to fail, they commenced to rob my Italian bees; in the morning they would be out before the Italians, passing in and out of every hive that I had on the place. I soon decided that this would not do; so I got the smoker, and smoked them to get the queen, and when I found her, off went her head. The bees were of three colors—black, gray, and some had the Italian mark. I will let the reader judge what kind of bees they were. I do not pretend to know anything about the Carniolans. I winter all of my bees on the summer stands, without any protection—in fact, they have not needed any so far, as the weather is mild. They are all in good condition, with plenty of honey, and are flying most of the time, and bringing in pollen from corn-meal. Honey is plentiful in the market, and sells at 20 cents per pound. I have my honey on hand yet. If I should want to sell it to the merchants, 15 cents per pound is all that they would give me. I sell it to customers for 17 cents per pound.

N. W. Afflerbaugh.

Cameron, Neb., Feb. 8, 1890.

Bees Did Well Last Summer.

I have 28 colonies of bees, which did very well last season. I sold 300 pounds of honey at 15 cents a pound. The bees are now in a much better condition than they were last year at this time.

H. G. Brown.

Eagleville, O., Feb. 9, 1890.

Wintering Bees in the Cellar.

I have 29 colonies of bees in the cellar, and some of them are doing all right, but 4 or 5 colonies are not all right; they came out of their hives, and spotted the fronts all over. I do not know just what the cause is, but it is my intention to try to make a success of the bee-business.

M. C. Davis.

Richland Center, Wis., Feb. 12, 1890.

Good Prospects for this Year.

The honey crop of last year was very good; I realized from 4 colonies, spring count, 974 pounds—all comb honey. I extracted only the imperfectly filled sections. Three-fourths of my crop was gathered from white clover, and the rest from linden. The prospects for this year are good.

A. F. Sanger.

Pilot Grove, Mo., Feb. 8, 1890.

Uneasy Bees—White Clover.

I put 62 colonies into the cellar last winter, and lost 2 queenless hybrid colonies; the rest were all strong. In May I had to feed them, and there were hard times for bees. My crop was 9,500 pounds of extracted honey, which I sold for 6½ cents per pound. My bees are getting uneasy in the cellar, and when there is a nice day, I will take them out for a flight. White clover looks well.

Ph. Pfeiffenberger.

Addison, Wis., Feb. 5, 1890.

Nameless Disease—Bee-Stings.

This has been one of the most beautiful winters for a long time. Drones have been flying in my apiary for two or three weeks. I put 107 colonies in, and they are all in fine condition so far. The "nameless disease" and poor seasons are the worst things that I have to contend with; the "nameless disease" is a regular puzzler to me. I saw a young bee hatch with it, and have had it commence in colonies after the queen was three years old. I have had queens die with it; drones have it also, but they do not show it as much as workers and queens. I wish that some one would hurry up and find a sure cure for it.

An article was written for one of the bee-papers, telling how he cured bee-stings, by holding the part stung over a lamp. I have cured stings this way for the last six or eight years, only in this way I use a Bingham hot-draft smoker. When I am stung, I rake the sting off, grab the smoker, give the part stung three or four puffs with the hot air and smoke, and the pain is gone instantly; that is, if I am stung on the wrist. The Bingham smoker is better for the curing of bee-stings, than any other smoker that I have used. Keep a red-hot fire in the smoker, and you have the best remedy for bee-stings that I know of.

B. T. Baldwin.

Marion, Ind., Feb. 10, 1890.

A Very Mild Winter.

I think that the American Bee Journal grows better every issue—in fact, I would not keep bees without it. The winter, so far, has been quite mild, so that bee-keepers who winter their bees on the summer stands, consider themselves in luck; to-day it looked like an April day, and the bees roared as in summer time, but we expect to have enough bad weather in March and April, to make up for this fine weather.

Marion Miller.

Le Claire, Iowa, Feb. 4, 1890.

Digested Nectar—Mild Winter.

We are living in a rapidly-advancing age, and nothing but a double-quick pace will keep one to the front. Theories born yesterday, are pronounced as facts to-day. If Solomon were on earth to-day, he would probably reverse his old "song," so as to make it read thus: That which we have done, we will do no more, and that which we have not done, we will do, or die in trying; for everything shall be new under the sun.

Only a few months ago bees were stinging acid into honey with their tails; now they digest it there; and if "digested" would only stop there, but it will not, or does not seem to do so. The article from Mr. Kanzler, on page 70, brings us fully up to that date; and I will also add that man also is digested eggs, hogs, etc. This brings us up to date. Now let us try to keep up to the times in bee-culture, and, above all, do not allow our literature to get behind.

I have lived in this vicinity for over 55 years, and this is the mildest winter that I ever knew. Bees went into winter quarters well supplied with stores, and the weather has been such as to enable them to fly about half the time.

D. Millard.

Mendon, Mich., Feb. 5, 1890.

Honey from Golden-Rod, etc.

On reading several recent numbers of the Bee Journal, I have been surprised in noticing how many places in the United States report a failure in golden-rod as a nectar-bearing plant. In eastern Kansas, it is our best hope for fall honey, and several times it has saved us from total failure—particularly in 1888, in which year there was no honey from fruit-bloom or clover, but a very abundant flow of nectar from golden-rod. In 1889, there was quite a good yield from clover—an average of 60 pounds per colony; in the fall, golden-rod bloomed freely, and for a few days bees were thick on it, neglecting every other flower, until a frost in one night quite stopped all further honey-flow for that season. The conclusion would seem to be, that golden-rod must have rain and tolerably warm weather, to produce nectar, and, under these conditions, it will do grandly. Give it a further trial, before condemning it as "no good."

We are hopeful for this year; clover is abundant, having been well protected by snow during our severest weather, and I hope to report 100 pounds per colony, or better, next fall.

Wm. M. Rowe.

Lawrence, Kans., Feb. 5, 1890.

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BEE JOURNAL

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BUSINESS MANAGER.

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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
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☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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The American Bee Journal	$1 00	
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Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

HONEY AND BEESWAX MARKET.

DENVER, Jan. 27.—1-lb. sections, 13@15c.; Extracted, 7@8c. Beeswax, 20@25c. Market well supplied. Demand moderate.
J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Jan. 25.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Jan. 22.—We quote: White clover 1-lbs., 11½@12½c.; 2-lbs., 10@11c. Basswood 1-lbs., 10½@11c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 13.—Honey is selling with more freedom than for some time, but prices remain at 12@13c for the best; 10@11c for what is not prime, and 8@10c for dark and buckwheat honey. Extracted is not so active, with prices at 7@8c for finest grades, and 6c for dark and off-color. Beeswax, 25c for yellow.
R. A. BURNETT, 161 S. Water St.

DETROIT, Feb. 10. — Comb honey is now quoted at 11@13c. The supply is not large; sales are slow. Extracted, 7@8c. Beeswax, 24c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Feb. 15.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Feb. 14.—Good demand for extracted honey, in glass jars, while demand from manufacturers is slow; it brings 5@8c per lb. Comb honey, 12@15c a lb. for best white.

Beeswax is in good demand at 20@24c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

The Report of the proceedings of the 20th annual session of the International American Bee-Association is now published. The price is 25 cts., postpaid. It contains, besides the report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office.

Honey Almanac for 1890.

JUST the thing needed to create a demand for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics, Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

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Borodino, N. Y.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.75; or the two Journals and the Book for $2.50.

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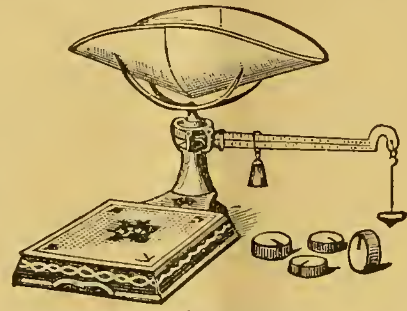
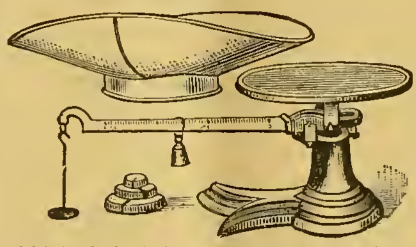


This Scale has steel bearings, and it weighs from ½-ounce to 240 pounds. Price, with a Single Brass Beam, as shown in the illustration, $3.00. With Double Beam for taking the tare, $3.50.

The Little Detective Scale.



This little Scale is made with steel bearings, and a brass Beam, and will weigh accurately ¼-ounce to 25 pounds. It supplies the great demand for a Housekeeper's Scale. Prices:

Single beam,	no scoop	....	$2.00.
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The December issue has 24 pages, a cut showing "The Home of the REVIEW," also an accompanying article descriptive of "The REVIEW, its Home, its Editor and his Family." This number shows more clearly, perhaps, the plan upon which the REVIEW is conducted, than does any single number that has preceded it. In its advertising columns will be found the description of a plan whereby all who wish, may secure the back numbers at a trifling cost. The special topic of this issue is, "What Will Best Combine with Bee-Keeping; and What Shall Bee-Keepers do Winters?" This number will be gladly sent free to all who apply, and with it will be sent two other numbers.

4Etf W. Z. HUTCHINSON, FLINT, MICH

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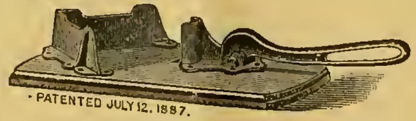
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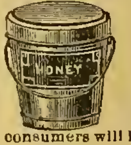

THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail: **Price, 75 cents per dozen, or $5.00 per 100.**

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Italian Queens from a Yard several miles distant, same price. Also Dealer in Supplies.
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Italian Queens and Bees at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

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THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. March 1, 1890. No. 9.

☞ La Grippe still holds the editor of the *Bee-Keepers' Advance* under its sway. We offer our sympathy.

Extra Pages are added to this issue of the BEE JOURNAL to give room for our Premium List, and also for illustrated descriptions of the many useful Supplies and Implements necessary for the successful management of the apiary during the coming honey season. Let all prepare in good time, and have everything necessary on hand before the honey season commences.

☞ The bee-keepers of Seneca County, N. Y., met at Ovid in their 7th annual convention on Feb. 12, at 10 a.m. The Past Worthy Lecturer of the New York State Grange, J. B. Whiting, was elected President, and C. L. Baley Secretary. Mr. G. M. Doolittle, of Onondaga County, was present by invitation, and gave them an hour's address, and was then kept on the floor for hours, answering questions. The meeting was largely attended by enthusiastic bee-keepers.

Fire has destroyed one of Mr. Dayton E. Barker's apiaries, at St. Joseph, Mo. The building in the apiary was stored with honey and other goods, and was entirely consumed, on the night of Feb. 13, 1890. Mr. B. had two apiaries—one containing 121 colonies of bees, and the other having 554—the latter is the one consumed. All will sympathize with him in his loss, as it is total and heavy, there being no insurance. Now, we ask, **why** was such an important thing neglected? He would have found $1,000 very convenient to have, in this the hour of calamity! Let this be a warning to all, who have property that ought to be insured against loss by fire.

Father Langstroth continues to grow more feeble, as we learn from Mrs. Cowan, his daughter. A letter dated Jan. 6, came from Mrs. Cowan during our illness, but was mislaid until now, containing an item which should have appeared long ago. It is as follows:

> On the 5th of December last, my father received a telegram from the "International Bee-Keepers' Convention," sending him the greetings of the convention, and regretting that he could not be with them.
>
> By some carelessness, the telegram was destroyed, and I could not remember the signatures, so I have never acknowledged it. Will you please to give this explanation in your JOURNAL, and extend to all the members of that convention (and to his other bee-keeping friends) his earnest desire that they may *all* have a happy and prosperous year.

We are well aware that Father Langstroth feels deeply grateful to all who think of him, and forward their grateful remembrances. Such lighten up his pathway and cheer his spirits, as the flesh grows weaker, and life's journey advances toward completion.

Here is what Asher M. Coe, of Coe Ridge, O., writes about promptly receiving our books:

> I received the "Honey Almanacs" and "Doolittle's Queen-Rearing" to-day. I am much pleased with the Honey Almanacs. As for Doolittle's book—it is exquisite! These books came very promptly; the letter was mailed the 6th, and I received the books on the 8th. Thanks for promptness.

We aim to be very prompt in filling all orders—and they are filled the same day as they are received, unless they call for something not in stock.

For particulars about clubbing Doolittle's book with our Journals, see page 153.

For prices of the Honey Almanacs in quantities, see page 149. The *Bee-Keepers' Advance* for February is just at hand, and contains the following;

> The Honey Almanac is just received. Nothing like it has been published before. It not only reveals to us the wonderful curative qualities of honey, but it will be a powerful agent in helping the producer to dispose of his crop. Too much cannot be said in its praise. Every producer of honey should scatter this friend to bee-keepers.

From Dakota comes the following item of commendation from the editor of the Fargo *Argus:*

> The ILLUSTRATED HOME JOURNAL has reached the *Argus* review table, and if the current number may be taken as a sample of the general character of the magazine, it is worthy of a place in every household in the land. Its table of contents is remarkably choice, both from a literary and artistic point of view.

☞ Attention is called to the fact that J. B. Mason & Sons have purchased the Carniolan queen business of John Andrews, of Patten's Mills, N. Y. See their advertisement in this issue.

How Beeswax is Made.—Among the interesting productions of a colony of bees, there is perhaps none more curious than that of making the wax which forms the receptacles for the nectar that the bees gather, and which, when melted, forms the beeswax of commerce. How the "busy bees" do this part of their work, is described in the following paragraphs:

> It is no mere extraneous substance which needs only to be collected for use; it is a bit of individual, organic home manufacture. If you examine the under surface of a cell-building worker-bee, you will find beneath the abdomen four pairs of white plates projecting from as many pockets in the increasing rings of this part of the body. These are the wax-plates made from the life-blood of the worker.
>
> Examine now, with a lens, one of the hinder legs; you will find that the stoutest joints are very "square-shouldered" at the hinge, and that the hinge is well over to one side, so that the shoulders form a pair of jaws, which open when a limb is bent, and close when it is straightened. The upper jaw has a row of spines which bite on a plate on the upper jaw; with this apparatus, piercing it with these spines, the worker withdraws a wax-plate from its pocket, transfers it to the front legs, and thence to the mouth, where it is laboriously masticated with a salivary secretion. Unless it undergoes this process, it lacks the quality requisite for cell-making.
>
> Beeswax is said to be the best substance for receiving and recording the vibrations of the needle of the phonograph, which bids fair to come into use as a practical machine, the telephone having prepared the business world for wonders of this sort.

The Time is at Hand when bee-keepers should be providing for next season's operations, by procuring the necessary "supplies," such as hives, comb foundation, sections, crates, and such implements as will be needed. Now is the time to procure such—before the *rush* comes, when the supply dealers will be busy, and be unable to promptly fill all their orders. To have such things on hand ready for use, when required, is a *pleasure;* but waiting for them to come, when needed for use, is very *disagreeable* and annoying.

The National Bee-Keepers' Union is thus endorsed by ex-President Dr. A. B. Mason, of Auburndale, Ohio:

> Please find the amount enclosed for dues to the National Bee-Keepers' Union for 1890. I want to "practice what I preach" in regard to helping on the good work, and I do most sincerely wish that the treasury might become so full of the "almighty dollars" that those having charge of its interests whould not have to "take thought for the morrow" in regard to funds to carry on the work of the Union.

Honey-Candy.—Several have asked for recipes for making honey-candy. The following is one, although not much honey is found in its composition:

> Use one pint of white sugar, water enough to dissolve it, and four table-spoonfuls of extracted honey. Boil until it becomes brittle on being dropped into cold water. Pull when cooling.

Bees and Fruit.—Under this heading, a correspondent in the *National Stockman and Farmer*, published at Pittsburgh, Pa., in its issue for Feb. 6, writes thus, showing the utility of keeping valuable facts before the people:

> The Honey Almanac, published by Thos. G. Newman, editor of the AMERICAN BEE JOURNAL, among its many useful items and recipes, contains the following valuable fact, which is not well understood generally by fruit-growers:
>
> It is very often the fact that fruit-growers complain of bees injuring their fruit, when the fact of the matter is, the honey-bees are the fruit-growers' best friends. The above-named publication puts it thus: "Bees do not puncture fruit, as some assert. When fruit is over-ripe, or the skin of the grape bursted, the bees will sometimes appropriate the juice, greatly to their detriment when no honey can be gathered. Such juices soon sour in the hives, becoming unfit for food of bees for winter, and disease and death is the result. Many bee-keepers also raise fruit, and their testimony universally agrees with the statement here made. On the other hand, bees are the best friends of the growers of small fruits. They fructify the flowers and cause the fruit to mature. Were it not for the bees and other insects which fertilize flowers, the trees and vines would cease to bear fruit, and become worthless. In a certain town in New England, so strong was the belief that bees injured fruit, that an ordinance was passed obliging the bee-keepers to remove their bees to another locality. After a year or two the fruit-growers decided to have the bees brought back, because so little fruit matured upon the trees."
>
> According to history, in the early days of Australia, we believe, clover seed imported into that country seemed well adapted to the soil and climate, and grew well, but it would produce no seed. It was suggested by some one that it lacked the necessary faculties for fertilization, as there were no bees in the country. As a test of the matter, bees were imported for the purpose, and the result was, that the clover bore seed.

A Sweet Sycamore Tree.—In a Chicago daily newspaper for Feb. 8, 1890, the following account of a bee-tree was published, from Galesburg, Ills. The amount of honey which the tree contained [1,100 pounds], is a pretty good yield for one colony of bees. The item reads thus:

> James Collins, a farmer of this county, while going through the timber on his farm recently, saw bees flying around an immense sycamore. His son and he cut the tree down, it proving a mere shell. As it struck the ground, it split open, revealing a section of honey 30 feet long. Mr. Collins secured 1,100 pounds of honey. He says that the bees would have filled a big barrel, but he had no means of hiving them.

Flax and Hemp.

Does flax or hemp yield any honey when in bloom? W. T. FARRINGTON.
Owosso, Mich., Feb. 16, 1890.

Hemp yields honey liberally; flax is not much visited by bees until late in the fall, when better honey-producing plants are scarce. The nectar is bitter and pungent.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

QUERIES and REPLIES.

Many Dead Bees Found After Being Shipped.

Written for the American Bee Journal

Query 690.—Last spring I shipped several colonies to different parties, and they reported a good many dead bees among them. I tacked the frames fast at the bottom and top, closed the entrances, and covered the top with new wire-cloth. What was the matter?—B. K.

I think that you used ordinary care. There ought to be, however, room enough above the frames for a very free circulation of bees.—EUGENE SECOR.

Perhaps the bees were too much crowded. The wire-cloth on top should be 2 inches above the tops of the frames, and the entrance also be covered with wire-cloth.—A. B. MASON.

If you did not put wire over the entrance, I would conclude that they died in trying to force an egress; otherwise, I do not know.—J. M. HAMBAUGH.

I should *guess* that so much wire-cloth exposed the bees too much, and that the jarring and shaking about, kept the bees from clustering, and many died from cold. —C. H. DIBBERN.

Did you have a space of about 4 inches between the top of frames and wire-cloth? You should have at least that distance; and if you could give them 2 inches at the bottom, all the better.—H. D. CUTTING.

The trouble might have been, first, bungling packing; second, not enough *bottom* ventilation; third, too much honey; fourth, too little honey; fifth, too many bees; and sixth, too much brood.—J. P. H. BROWN.

In shipping bees, they require top room. Let the wire-cloth be at least 3 inches from the frames. In shipping, I use a board for the top, and raise it 2 inches from the edges of the hive by cleats, and tack wire-cloth all around.—P. L. VIALLON.

Bees do not live forever. In the spring, as well as at other times, many old bees die every day. When the bees have their liberty, they go out of the hive to die, or are carried out and away. A few worry themselves to death, when confined.—M. MAHIN.

"A good many dead bees" is very indefinite. I think that you will always find quite a number of dead bees in a hive after shutting up a colony for some hours, and one not accustomed to such things, might think that something was wrong, when all was right.—C. C. MILLER.

We cannot tell unless we know the particulars—temperature, strength of colonies, amount of brood, amount of rough treatment received, etc. A number of bees die of fatigue in trying to force their way through the wire-cloth.—DADANT & SON.

Oh, gracious! who can tell what the matter was? Perhaps lack of water; perhaps over-heating by being placed in the sunshine. We could all tell if we knew all of the detail circumstances; otherwise, no one can tell with any certainty.—JAS. HEDDON.

You should have left at least an inch of space below the bottom of the frame, and 2 inches between the tops and the wire-cloth; the first for dead bees to fall into, and the second for the bees to cluster in, and for free circulation of air.—G. M. DOOLITTLE.

You mention nothing about the temperature of the weather, or the distance that you shipped the bees, or the crowded, or otherwise, condition of the colonies. You will have to be a little more definite, before I will venture a guess.—MRS. L. HARRISON.

No one can tell with the limited *data* given. There are many reasons that might be given, but none might be correct. The person who received the bees, ought to be able to give the reason, if any one could.—J. E. POND.

May they not have been placed in the sunshine, or covered so that they were not properly ventilated? I have known like effect from both causes. In shipping, I always warn in bold script, against covering the top, or exposure to the sunshine.—A. J. COOK.

Use the invertible hive; tack wire-cloth on the bottom and top, and put the hive on one end; the bees will ship almost any distance without loss to amount to anything. Heddon's half-cases would be good for this, if he would consent to a bee-space at both the top and bottom of the frames.—J. M. SHUCK.

The "matter" was, instead of tacking the wire-cloth immediately on top of the frames, you should have fastened a 3 or 4 inch deep super, or shallow box, to the top of the brood-chamber, and covered the top of this shallow box with the wire-cloth. This would have given the excited bees plenty of room above the tops of the frames, and prevented the bees from crowding against the wire-cloth, and thus excluding the air and smothering a part of the bees.—G. W. DEMAREE.

Your *data* are insufficient to enable one to form a safe judgment. How long were the bees confined? What was the weather as to temperature? How strong were the colonies? How many do you mean by a "good many?" If the dead bees were about a tea-cupful, they probably died from natural causes; if a quart or more, they were probably smothered or worried to death by too high a temperature. If the colonies were very strong, and the weather warm, it would have been safer to have provided for a circulation of air through the hive.—R. L. TAYLOR.

I should say, *want of bottom ventilation.* It is a strange fact that a colony of confined bees cannot properly ventilate a hive *from the top.* Now open up a slide in the bottom, covering with a piece of wire-cloth, and instantly the hot air will be forced out of the bottom, in a strong current, that feels almost hot enough to melt down the combs, and the more the bees are agitated, the hotter is the current. The above fact was learned at the Columbus Centennial, where I had 2 colonies of bees. Though often confined for days together, they came home fully as strong as when they left my apiary—thanks to Dr. Mason, to give free bottom ventilation. They also wintered well, though they came home late in October.—G. L. TINKER.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside" in the land.

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.60**, if the order is received at this office by March 31, 1890—when this offer will end, the regular rate being $1.75.

CORRESPONDENCE.

HIVES.

The Advantages of Frame Hives Over the Box-Hives.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

For a long time it has been taken for granted that the movable-frame hive was vastly superior to the box-hive for the production of comb honey, with but little thought being given to the subject. If I asked a prominent bee-keeper the question, Which is the better, the frame hive or the box-hive, for the production of comb honey? the answer I would receive, nine times out of ten, would be, "Why, the frame hive, most certainly. If this were not so, all the writers in the different bee-papers would not be writing about frame hives and praising them up."

But the simple reason that writers on bee-culture use frame hives, amounts to but little. The thing we wish to know is, why these writers use the frame hive in preference to a well-made and well-proportioned box-hive? As I am asked nearly the same thing by a correspondent, to give my "views through the columns of the AMERICAN BEE JOURNAL," perhaps it may be interesting to some to go over these grounds with me.

Paul, the great apostle to the Gentiles, told the early Christians that they should always be ready "to give a reason of their hope;" so any bee-keeper should always be ready to give a valid reason for the way he manages his bees, or good reasons to support whatever he writes for publication. If any man or woman cannot do this, they can rest assured that there is something wrong somewhere. So, when asked for my reason, I questioned myself, "Why do I use movable-frame hives in preference to box-hives?" As I believe that I have good reasons for so doing, I will give them to the readers of the BEE JOURNAL, and let them draw their own conclusions as to the correctness of the same.

We are to suppose that each style of hive is well-made, and of the same dimensions; that the box-hive gives as easy access to the surplus arrangement as does the other, so that we may be fair in our reasoning. Keeping all of the above in our minds, we proceed. As spring is the season when we first begin to prepare to get the honey crop, I will commence with that time.

Upon the first warm days, we wish to know if each hive has honey enough in it to last till the flowers bloom, so that the bees can secure a living. To this end we wish to examine the inside of the hive. We come to the box-hive, take it from the bottom-board, and hold it up to the sun (driving the bees down with smoke), to see if we can see any sealed honey, and after inspecting all as best we can, we have to mostly guess at the matter, and trust that our "guess" is right. If bars are used at the top in connection with the honey-board, we can remove the honey-board, and guess a little closer than before.

With the movable-frame hive, all we have to do is to lift out the frames, and we know to a certainty just how much honey there is in the hive. As we work on, we soon find a colony with little or no honey, which would starve if not fed in a week, so we get out the feeder, and feed them. If it keeps warm, so that the bees can get at the feeder, or the combs of honey we place in the chamber of the hive, all goes well. If it turns cold, the bees starve. In a case like this, with a frame hive, all we have to do is to give the starving colony a frame of sealed honey from the honey-room, or fill a comb with syrup, and hang it near the center of the cluster of bees, when we *know* that they are all right.

Then upon an examination we find a colony in the above condition, while the next one has much more honey than is needed. With the frame hive we can exchange an empty comb for a full one, and thus both colonies are benefited, and we are saved all the trouble of feeding.

A little later in the season, we wish to know that each hive has a good, prolific queen, so that workers may be produced in time for the honey harvest; and if they have not such a queen, we procure one for them by rearing one, or otherwise. Here we are almost entirely baffled with the box-hive, while we can know to a certainty about the queen being good or poor, if we use a frame hive; and, if poor, the matter can be easily remedied.

At this time we also wish to get all surplus drone-comb out of the hive, if this has not already been done; for if the bees are allowed more or less drone-comb, this will soon be filled with drones, which, when hatched, will consume large quantities of honey that would otherwise be stored as surplus. This keeping the drone-comb out of the hive is no small item, for I have known so much drone-comb to be built by a colony having an old and failing queen, that the next season the drones produced from that comb consumed nearly all the honey, and as fast as the few workers reared could gather it. With the box-hive we can do little or nothing by way of getting rid of this drone-comb, while with the frame hive it is easily taken out, and worker-comb fitted in its place, or weaker colonies allowed to "patch" these with nice, all-worker comb.

Then, I believe, that a colony of bees can be increased much faster by a judicious spreading of the brood at the right time, thus getting the bees ready much quicker for an early harvest, than they would be if left to themselves, or by any other means which I know of, which thing (spreading brood) is an utter impossibility with the box-hive.

Again, as it approaches the honey harvest, we find that some of the colonies are extra strong, while others are weak. This we wish to remedy by taking bees and brood from the stronger, and giving them to the weak. Of course, bees can be drummed out of the box-hives, and given to others, but how much easier it is to take a frame of brood and bees from a frame hive, and place it in another hive, than by any plan that we could use were we to adopt box-hives.

Many more reasons could be given, but the foregoing are quite sufficient, it seems to me, to convince any one that the day of box-hives should have passed away long ago; yet we are assured by those who profess to know, that there are still more bees in box-hives in the United States than there are in frame hives.

Borodino, N. Y.

FRAMES.

Which are Better, the Wide or the Narrow, Frames?

Written for the American Bee Journal

BY J. E. POND.

In the discussion of this question, it seems to me that no attention has, as yet, been called to the natural law governing the matter; that brace-combs will be built when needed, all must admit; and that they are needed when required to hold combs in position, is an assumption that, I think, all will agree is correct. With narrow frames, and wide spacing, the upper cells will be elongated when used for storage, and, as a matter of course, the brace-combs will be built, as they always are. Why, no one as yet can say positively.

But to come straight to the point, what is the natural law? That bees seal up brood in cells only 7-16 of an inch deep, and that they build comb for brood-comb only $\frac{7}{8}$ of an inch thick, has been proved time and time again. The late, lamented Quinby, when experimenting with tin for cells, made them one inch thick, but found that brood was always sealed up in such combs, by placing the cappings within the cells, instead of on the outer face, as is done with wax. Cells used for storage will be built as deep as room is given ; I myself have had them drawn out 6 inches in depth.

Starting with the above premise, what is the natural conclusion ? I have found it to be just that conclusion in theory that experiment proves a fact in practice, viz : with frames ⅞ of an inch wide, spaced just bee-space apart, the bees will fill all the cells from top to bottom with brood, provided deeper cells, or wider spacing, is used in the storage chamber. This is not guess-work or theory.

In experiments covering a term of years, I have found the same results, and without variation, in every instance. Such being the fact, what follows ? In answer, I will say, that the brood is invariably reared in the brood-chamber—the surplus is stored, and at once, where it should be, and no brace-combs are built ; and not only this, but the rearing of drones is kept well in hand, excess of swarming is easily prevented, and, in fact, the whole matter of bee-keeping work is reduced to a minimum, all that is required being to start with sheets of comb just ⅞ of an inch thick, and so spaced that they cannot be built any deeper.

I trust that I have made myself understood ; I know that if the plan indicated is followed, bee-keeping will not only be found an easier pursuit, but speedy progress will be made from now on.

North Attleboro, Mass.

PRIZE ESSAY.

Extracted Honey—Its Production and Importance.

Written for the Amerciean Bee Journal

BY S. A. SHUCK.

Mr. A. I. Root, of Medina, O., says : "In 1867, from 20 colonies I took the first thousand pounds of honey ever taken with an extractor, and increased to 35 colonies. In 1869, I extracted 6,162 pounds of honey from 48 colonies, and sold the product at 25 cents per pound."

It is now just 20 years since this "Novice" opened up the way to the successful management of an apiary for extracted honey ; yet he further states that there are now over 10,000 of the original all-metal honey-extractors in use.

In consideration of the facts that honey-extractors are manufactured by several firms, and that these machines are in use, not only in every State and Province in the United States and Canada, but in nearly every civilized nation on the globe, we can justly conclude that this business is of no mean proportions, and its development has been wonderful indeed.

The annual yield of honey in the United States has been estimated at 200,000,000 pounds, or more, and it is believed that two-thirds of this was taken with the extractor. So great has been the yield in favorable seasons, that in some localities the price was reduced to almost nothing.

The wholesale adulteration of extracted honey with glucose and cheap syrups, by unscrupulous dealers, had much to do in reducing the price below actual cost. However, these low prices put an end to adulteration—at least for a time. This, with an increased effort on the part of bee-keepers to maintain the purity of extracted honey, and to prove its superiority over sugar and syrups as a food element, has placed the business in a more prosperous condition, and the prices relized to-day are reasonably remunerative.

MANAGEMENT FOR EXTRACTED HONEY.

The management of an apiary in a good season for extracted honey, by one who is enthusiastic in his business efforts, is a matter of no small interest. The incessant effort on the part of the bees, as they hurry to and fro from the hive in their endless search of every nook and cranny of street, and lane, and field, and forest, lest a single drop of the golden nectar, vouchsafed by an all-wise Creator, be allowed to go to waste ; and the rapidity with which the combs are filled, and refilled, as the apiarist empties and returns them to the hive, are matters that interest and excite the admiration of any and all persons who have a love for the works of Nature.

The bee-keeper who is well equipped for the management of an apiary for extracted honey, has a good supply of surplus combs. All combs used in the management of an apiary on modern principles, are built in light frames. These frames are either square or oblong, owing to the fancy of the bee-keeper, and are suspended in a plain box, each box containing from six to a dozen, or more, of these frames, the number being governed mostly by the box or hive.

The combs are a little less than an inch in thickness, and are spaced about 1½ inches from center to center in the hive. This enables the bees to pass and re-pass between the combs.

When the honey season comes on, which, in the latitude of Chicago, is about the first of June, the bee-keeper places two or more of these boxes together, one above the other. The bees gather the nectar from the flowers and place it in the combs. This nectar, when first taken from the flowers, is very thin and watery, but owing to the great number of bees in a hive, the temperature is kept up to a sufficient degree to keep up evaporation, and by persistent effort on the part of the bees in ventilating the hive day and night, the water is evaporated from this nectar, and it becomes honey. Then the bees seal it up in the combs, and they are ready to be taken from the hives, and the honey extracted from them.

In some localities, such as Southern California, Florida and some other Southern States, many bee-keepers extract the honey from the combs before the bees seal it up. In this case, the honey is placed in large vessels and evaporated, or ripened, by the heat of the sun, or run through an evaporating apparatus somewhat similar to that used in reducing cane-juice to syrups.

THE HONEY-EXTRACTOR AND ITS USE.

The machine used for taking the honey from the combs is called an "extractor," and consists of a large can with a revolving rack in it. This rack is constructed so as to hold two or more of the honey-combs in a vertical position. When the combs have been capped or sealed over by the bees, the cappings are removed with a sharp knife ; the combs are then placed in the revolving rack in the extractor-can. By means of a simple crank, or small gearing, the rack is set in motion, and turned with sufficient velocity to throw the honey from the outer side of the combs, by what is known as centrifugal force. The combs are reversed, and the same process frees the honey from the opposite side.

The honey thus thrown from the combs strikes against the sides of the can, and runs to the bottom, to be drawn out by a faucet. This is called "extracting," and, in consequence, the honey is called "extracted honey."

The honey is drawn from the extractor and placed in open vessels, usually large barrels, and allowed to stand until the small particles of comb that were dislodged by the uncapping-knife, rise to the surface. After removing these bits of comb, the honey is placed in vessels suitable for marketing, and secured against dust and insects. Honey in this condition, with few exceptions, will granulate as soon as the weather becomes cool ; and when the weather becomes cold and freezing, it becomes quite hard. It can be reduced to a liquid state by heating slowly, but it should not be allowed to boil, as it becomes dark in appearance, and the flavor is injured to a greater or less degree, if made too hot.

THE QUALITY OF EXTRACTED HONEY.

Its quality depends both upon the source from which it is obtained, and the care it receives after it is taken from the hive.

There are as many different kinds of honey as there are different kinds of plants, shrubs and trees that yield nectar; but the honey from several plants and trees are very much alike in appearance, yet it differs distinctly in flavor; each individual class of plants producing, peculiarly to itself, that indescribable quality, aroma, the delicacies of which are as subtile to the taste as the most delicate tints in the myriads of flowers from which the nectar was obtained, are to the human eye.

CARING FOR EXTRACTED HONEY.

Whatever may have been the source from which the honey was obtained, if it is not properly cared for, it will soon deteriorate. The first thing of paramount importance in this direction, is to have it thoroughly ripened; that is, to have it reduced from the thin, watery condition, from which it was taken from the flowers, to a consistency required by the bees before they will seal it up in their combs. To do this with unerring certainty, and retain all the delicacies in flavor that Nature has bestowed upon it, it should be left with the bees until they have completed their work upon it. It is then ready to be extracted, and this should be done as soon as the combs are taken from the hives, as the labor of uncapping and extracting is much lighter while the combs retain the heat of the hive; and there can be no improvement made in the honey by allowing it to cool in the combs.

As soon as possible after extracting, the honey should be put into clean, tight vessels, and stored in a dry, warm room. Under these conditions it will retain all its good qualities for many years, and can be marketed at any time.

MARKETING EXTRACTED HONEY.

The kind of vessels best adapted to the marketing of extracted honey, depends very much upon the trade to be supplied. If for manufacturing purposes, where considerable quantities are used, barrels holding from 300 pounds to 500 pounds would, probably, be the best. For a retail trade in cities and towns, small vessels, holding from one pound to twenty-five pounds, are most convenient. Square tin cans, holding about 60 pounds each, and crated one and two in a crate, are very convenient for marketing, and in many instances are preferable to the large barrels, as they are so much more easily handled.

The bee-keeper who supplies a country trade should be prepared to supply any quantity, from one pound to 250 pounds.

USES OF EXTRACTED HONEY.

As a food element it has no equal in the whole list of sweets, and its uses are very many. Children can eat it without stint, and are not troubled with sour stomachs, or bowel disorders so common among children that are fed lavishly upon candies and sugar. It can be substituted for sugar in nearly everything about the kitchen.

As a preservation of fruits, it is superior to sugar. Many dyspeptics, who dare not eat sugar, eat honey, and are benefited by it. Lung and throat affections are mitigated, and many are cured by the continued use of honey.

It is used in curing meats and flavoring tobacco. Druggists and doctors use it in compounding medicines; and in the manufacture of wines and other beverages, where sweetening is required, it is excellent.

In consideration of the fact that extracted honey is healthier than sugar or syrups, it should be used in every household, in preference to them. Nice, white, extracted honey is as cheap to-day, as the best grades of sugar; and recent developments in apiculture, together with the almost unlimited field for production, warrant the conclusion that this business is capable of being increased many fold.

The are hundreds of thousands of bee-keepers in the United States, and millions of pounds of honey are produced annually, yet no one is robbed of a farthing's worth of his earthly possessions, and the soil is not impoverished; but,

> To our Nation's wealth
>   Are added, day by day,
> Millions, with better health,
>   That otherwise would stay
> In the bosom of earth,
>   Or waste on desert air,
> But for the bee's great worth,
>   Its keeper and his care.

Liverpool, Ills.

ASSOCIATION.

Duties of the Members of Bee-Keepers' Societies.

Read at the Colorado State Convention

BY V. DEVINNEY.

The formation of clubs, unions, and associations for certain purposes, and with special objects in view, is the outgrowth of a well-enlightened state of civilized society; for barbarous man needs but little, and his wants are but few, his own hands often supplying all his demands; but enlightened man, on the contrary, with unlimited wants, cannot attain them without the co-operation and assistance of others. Hence, as population multiplies, thereby necessarily increasing the business of the nation, as a result associations spring up in every department of trade and avocation.

The obvious purpose of these associations is to promote the welfare or pleasure of their members. That many of them fail in attaining these hoped-for results, is unquestioned; that a society, whose individual members are to be mutually benefitted by association, should weaken and perish, is wonderful to contemplate. There is an explanation and a cause, no doubt, for this, which we, the State Bee-Keepers' Association, should ascertain, and, if possible, remedy while we, as a society, are still vigorous and powerful.

It may be well to here inquire what are the requirements of the individual members of a society. As man is an intelligent moral being, imbued with a feeling of benevolence, he is morally obligated by all the attributes of his better nature, to assist in the work of the society, and also to build it up. If he does not do this, he stultifies himself and violates an unspoken, but nevertheless an implied, obligation to be a worthy and helpful member. Thus it often is, that a society accomplishes little, or nothing, owing to the failure of each individual to do his duty, and perform his part of the work; for when nothing is done, nothing is gained. A hive without workers gathers no honey; a choir whose members sing not, makes no music.

How, then, can a bee-keepers' association, or, I may say, any other association, be useful, grow strong and powerful, if its members take little or no interest in the society, and do but a small share, or no share at all, of the society's work? A society in this condition will accomplish nothing, but will foster disappointment, discontent, and end in dissolution. Such a sad result is not presumed, nor contemplated in organizing a society; but it is too common a result, I am sorry to say, to be contradicted.

The symptoms of such a result are manifested in various ways—in a scant attendance at the meetings of the society; a want of zeal and interest in the discussions and work of the meetings; a backwardness in aiding the development of the society's work; a failure to respond to the orders of the society for essays; and suggestions in kind and in quality to correspond to the needs of the society,—these and many other delinquencies stand before us like "accusing spirits," seeking from us words of explanation for actions so strange.

A member once said, "I did not attend the meeting, because I thought there would be nothing of importance done." Others have also expressed to me similar views. Now this man, we infer, thought he had nothing to do but to rest and play while the others worked; but it is possible that each one of the others thought as he did; then who was to do the work of the society, and crown it with honor and glory? A society in some respects is like a carriage-wheel—the members are its spokes, the hub is the foundation, or interests of the society, upon which the members plant themselves; the fellies are the band, or bond—the rules, and laws which bind us all together. Each has a part to perform; none can say to the other, "Work, while I rest."

Now let us ascertain what are the duties of a member of the bee-keepers' association. In every condition of life, from the cradle to the grave—in the family, in school, at play, on parade, and in all united efforts of men and women,—each and all without exception, have a duty to do—a work to perform, and we can no more release ourselves from the obligations which these or other conditions impose upon us, than we can release ourselves from the obligation to live honest and virtuous lives. They who fail to reciprocate with their comrades, and shun the duties which association imposes, are, to say the least, moral delinquents.

The very idea of association is an acknowledgment of our individual weakness and need of help. Thus we are appealed to by the most tender and sacred feelings of the heart, to offer our counsel, caution or instruction to our comrades in life's great struggle for existence, comfort and happiness. If this is not true, then association is a mockery and fellowship a farce, and membership a joke, pledges a jest, and obligations perishable toys.

Life itself is not a joke, nor a toy, nor can any division of it by any logical conclusion be so considered. Life is measured out to us in days and years, as so much cloth to be worn, returned, and accounted for in strict solemnity. We, the bee-keepers of Colorado, are not a set of merry-makers; nor do we consider our proceedings jocular, nor our sessions funny. Yet it seems comical that the important labor of the State Bee-Keepers' Association is limited to a one day's session, and the designated topics to be considered but six, and these offered by but six members of the society!

Whether this is a creditable exhibit of the utility and work of the Association, it is not my purpose to say; but I do feel impelled to say that a better attendance at our meetings, and a more extended programme, would be but the fulfillment of our obligations and duties as members of the State Bee-Keepers' Association. Nor do I consider that that would suffice. More, even, is required.

A sort of special friendship should be cultivated between each other, based upon a mutuality of interests and upon a unity of occupation. We should visit each other at our homes, investigate each other's work in the apiary, compare plans or methods of work, and take items of each other. We should take a special interest in each other, for our interests flow together. A love of more frequent association should grow up among us. A spirit of good-will and neighborly kindness should exist between us; and, above all, a spirit of justice and wisdom should guide us in the disposition of our products, to the end that an injurious and ruinous rivalry shall not overload the market with honey, below the cost of production.

These are but a few of the suggestions and admonitions which I might point out as assumed obligations entered into by the members of the State Bee-Keepers' Association; but enough has been cited to induce thought, guide us in our undertaking,—that is, to make the State Bee-Keepers' Association of Colorado one of the most important and useful of the industrial associations of this our great "Centennial State."

Denver, Colo.

BEE-ITEMS.

An Interesting Apicultural Letter and Its Reply.

[The following letter, written by Mr. M. M. Baldridge, of St. Charles, Ills., to Dr. C. C. Miller, is considered of sufficient value to merit publication in the AMERICAN BEE JOURNAL; and the reply thereto, by Dr. Miller, of Marengo, Ills., will be found to be no less important and profitable:—ED.]

FRIEND MILLER:—I have kept so quiet, and for such a long time, that perhaps you may think I am dead, but such is not the case. Let me briefly say that I went to Wisconsin in April, 1889, and bought a small apiary of 50 colonies in one-story hives, as a start.

MOVING BEES ON A WAGON.

I bought the bees in Vernon county, Wis., and then moved them by wagon some 25 miles, close to Richland Center, in Richland county—only about a mile north of the city.

I used a hay-rack to move the bees, and moved them at two loads, but ought to have moved them at one load. It was very hot weather—being that hot period in early May. I lost none, however; and only a few combs (less than a dozen) were broken down. I never use any hay or straw on a rack, nor springs under it, when moving bees, as it is unnecessary; but I use boards above the cross-pieces so as to have a level floor; stakes and boards on each side to keep the hives in place, and I prefer to have the combs run from side to side of the rack.

I closed the season up there in the latter part of July with 105 colonies, and about two tons of honey (chiefly extracted), which was not more than half a crop. Being my first season, I had a deal to do, and did not have things ready to catch the honey-flow, but I will try to be ready another year.

For divers reasons, not necessary to mention here, I reduced the apiary in October to 82 colonies, which is now in winter quarters up there. The bees were put into a cave (built by myself) on Nov. 6, and I left there for my home here on Nov. 9.

The bees were moved to the bee-cave, the distance of about a mile, on a hay-rack, at three loads, but I could have moved them readily and easily at two loads, had it been necessary. They were put into the cave the same day, and without being permitted to fly. Three years ago I moved some 35 hives of bees four miles on Nov. 23, and wintered them in my house-cellar, without giving the bees a chance to fly, and they came out in the spring in fine condition. I could not see but they wintered as well as though they had been given a chance to fly after getting them home.

You will notice that my bees in Wisconsin were put into winter quarters much earlier than was recommended by the members of the last Northwestern Bee-Convention, held in Chicago—Nov. 25, I think was the date that they fixed upon. My bees here at home (24 colonies) I put into my house-cellar this year on Nov. 13, and a year ago, on election day. Had my bee-cave in Wisconsin been ready, I should have put my bees therein early in October, as I see no good reason for leaving them out-doors any later, having got through breeding in September. The percentage of bees that fly out of the hives in October and November, when there is no honey to gather, is very small, according to my observation, and such as do fly are perhaps so old and worthless as to be of little value, anyway, and they might as well die in the repository, if it be simply for the want of a flight.

I produced only some 300 pounds of honey in one-pound sections last year, but, in the future, I propose to make a specialty of comb honey. This honey I sent home, and have sold the same to consumers for about 20 cents per pound. The sections were only 1½ inches wide, and being only 4¼x4¼, they would weigh, when well filled, only 12 to 14 ounces each. I used no separators, for I do not find it necessary when the sections are of that width, or 1⅜ inches.

The proper way to sell honey, whether in the comb or liquid, is by weight; but I did not sell mine that way, as it was not convenient to do so. I simply sold six sections, when well filled, for $1.00; but when a less number was taken, for 20 cents each. I sold direct to consumers. "Store honey," not so nice and white as mine, was being sold at the same time for 15 to 18 cents; but I always find plenty of people willing to pay a fancy price for a gilt-edged article of honey, or anything else.

COMB FOUNDATION IN THE SECTIONS.

I did not use comb foundation the full size of the sections, as many do, but simply small V-shaped starters, only an inch on each side. Some of my bee-friends use strips of thin foundation in sections only an inch wide, and they secured last year some of the largest yields of comb honey that have been reported. One of these parties lives in Wisconsin, in Chippewa county, and he reports to me a yield of 6,500 pounds of comb honey in one-pound sections, from 53 colonies, spring count.

Another lives in northwestern Missouri, and he reports a yield of 5,800 pounds of comb honey in one-pound sections, from 30 colonies, spring count. I have some very good reasons for my belief, when I assert that it is not economy, nor advisable, to use comb foundation, thick or thin, the full size in sections. What have you to say to this?

COMB HONEY IN T-SUPERS.

I am still using the T-super, but I must say that I am getting disgusted with it; and why? Because the bees daub, or soil, the outside of the sections too much, and squirt too much bee-glue into the openings. This can be avoided somewhat by using an extra set of T-tins on top of each set of sections, but this is an expense that should in some way be saved.

It is a big job to clean the outside of sections properly when the crop of honey is a large one. In the future I must use a super that will enable me to secure my crop of comb honey in sections nearly as clean, on the outside, as when first put on. What have you to say in reply to this?

FUMIGATING COMB HONEY.

I notice in the bee-papers that you yet go to the trouble and expense each year, of fumigating your comb honey in the sections to destroy the moth-worm. This may be necessary in your case, but not in mine. It seems to me that your fears are more imaginary than otherwise.

MIGRATORY BEE-KEEPING.

I notice that Byron Walker, of Michigan, is imbued with the idea that he can make the traveling-apiary enterprise *pay*. Perhaps he can, but he must do better than he did the past year. It seems that he bought 100 colonies of bees to start with, in Tennessee last spring, and, in course of time, went with them by rail to southwestern Wisconsin, thereby incurring an expense, all told, of some $700, up to the close of the honey season.

He reports how much honey he secured both in Tennessee and Wisconsin, but the total is by no means as much as he would, or should, have secured in Wisconsin alone, had he bought as many colonies up there at the same date, and invested the same amount of money. Nor did he close the season with an apiary as large as if bought in Wisconsin. This being the case, his enterprise thus far has been a failure—so far as demonstrating that a traveling apiary will pay.

Mr. Walker now proposes to take his apiary down South, somewhere, and perhaps has gone with it long ago. His idea, or programme, is to come up the Mississippi river by boat, and to start in time to catch the honey-flow all along the route to Wisconsin. When he has "gone through the mill," as I and some others have, he will find that catching honey-flows all along the Mississippi river, is quite imaginative and unprofitable.

What the past has taught me is this: That it *will pay*, or can be made to pay, to travel with an apiary from South to North, or *vice versa*, but that it will not pay to make more than *one* move from South to North, or back again—not even when the southern point is in the latitude of New Orleans, and the northern one as far up as Wisconsin. The reason why is, that there is then barely sufficient time to leave one honey-harvest, and reach the other, with colonies that have regained the loss in bees and brood incident to the journey.

May is a good honey month near New Orleans, and yet it is absolutely necessary to leave there with bees, even when transported by rail, early in May, so as to give the bees sufficient time to recruit to be in proper strength to gather the crop of white honey—from clover and basswood—in Illinois or Wisconsin, in June and July. The one move also saves labor and expense. It takes too long a time to move an apiary from South to North by water—two to five days is time enough to lose in making the trip, and this can only be secured by rail. Bees can then be moved in safety in case an open stock-car be used, when the bees are properly prepared for the journey, and properly arranged in the car.

The Oatman Brothers inform me that they have recently sold their entire interest in the bee-business, and simply because they have no time, any longer, to give attention to it, they being directly and indirectly interested in farming, and the management of some 15 to 20 cheese and butter factories. No one, perhaps, in the State of Illinois, has had greater success in the bee-business, for a term of years, than the Oatman Brothers, and it is to be regretted by bee-keepers that they are compelled to leave our ranks for the reason given.

Very truly yours,
M. M. BALDRIDGE.

[Dr. Miller's interesting reply to the foregoing letter, is as follows:—ED.]

FRIEND BALDRIDGE:— In hauling bees on the wagon, I have always placed them as you have, so as "to have the combs run from side to side," or across the wagon, and I have been inclined to maintain that it was the only correct way, but others think differently, and in this I think it will be found that "circumstances alter cases."

On roads as level and smooth as they usually are with me, there is very little jolting, and the jarring is mostly from side to side, and placing the combs across the wagon is certainly the right way to have the least damage when the wagon shakes from side to side. When going up or down *very* steep hills, however, it may be best to have the combs run from front to rear, and the same may be said about jolting down off a bridge, where there is a fall of several inches. I think that in some of the hilly places in California, the hives are placed so that the frames run from front to rear.

The question is sometimes asked whether bees can be safely put into the cellar without a flight after being hauled, and I have never dared to follow your example, but always let my bees have a flight after hauling in the fall, before putting into the cellar. It is reasonable to suppose that the excitement of hauling makes the bees cram themselves so that a flight will be a benefit; but facts are stubborn things, and your success may encourage those who find it quite inconvenient to give a flight after hauling. I always supposed that jarring hives in winter confinement was injurious, and I still think so, but I must confess that some of my colonies, which have been subjected to a good deal of kicking throughout the winter, have not shown that they were particularly injured by it. Still, unless very inconvenient to do so, I think that I should always let my bees fly after hauling.

PUTTING BEES INTO THE CELLAR.

I think that you are a little in error about the time fixed upon by the Chicago convention as the best time to put bees into cellars. Some of them said Nov. 25, but I am sure that some placed the date much earlier—some in October. The tendency now-a-days is, I think, toward earlier cellaring.

I am looking to see a report from those who have put in bees *too* early. I do not mean by this, that I think many, if indeed any, are taking too early a date, but I am quite sure that bees have heretofore been put in too late, by a large number, and I would like to know just how early is "too early." I hardly think that I shall ever want bees out of the cellar hereafter in November at all, if they are not wintered out-doors.

SEPARATORS—STARTERS IN SECTIONS.

Although you needed no separators with sections 1½ inches wide, you may not succeed so well at another time. If honey is coming in very slowly, I feel pretty sure that you would have some sections bulge out badly.

You seem to reason that the small, V-shaped starter, measuring one inch on each side, gave a large yield per colony, although I hardly think that you meant to carry that view. I very much doubt that the small starters increased the yield of honey. If you had told us that half the colonies in an apiary had small starters, the other half full starters, and that those with small starters did best, it would have been some evidence in favor of small starters. I suspect that in the cases mentioned, there would not have been a very great difference. There was a heavy flow of honey; with a light flow of honey, there might have been a difference in favor of full starters. Still, there are few things established beyond doubt, and if it can be proven that more honey can be gotten with smaller starters, it will be a gain.

A set of T tins on top of the sections will prevent the bees from getting between the sections at the top, but it will make a line of glue at the edge of the T tin, the same as at the bottom. Last year I got for my supers, to put in place of T tins on top, pieces of wood separator as long as the T tins, and ¼ inch wide. This will leave some glue at the upper corners of the sections, but that is not so bad as having a line half an inch from the corner on the top.

I should be glad to do without brimstoning my honey, and I did not do so the last time till forced to it by seeing the little worms in the sections, and under such circumstances I think that you would brimstone.

We all look on with interest to see what will be the outcome of the migratory business. C. C. MILLER.

NOT FOR FUN.

Keeping Bees for Profit and Pleasure.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

"Good morning, Mrs. Harrison. I called to talk about bees, and ask your advice whether I had better work them for comb or extracted honey. Is it true that bees will store double the amount of extracted honey, that they will of comb, during the same time? I do not want to keep bees for the fun of it, but for the money there is in them."

I replied that it is best, as a general thing, to produce both kinds, and be governed by what your market demands; and another thing—some prefer handling comb honey to extracted, and *vice versa*. The Dadants work their apiaries for extracted only, and find a market for tons of it, as their brand of honey is well known, and has gained a reputation for purity and excellence.

Peoria is not a good market for extracted honey, as it received its death-blow years ago, in the sale of a spurious article; but it is now being resurrected slowly. I think that a good market might be built up here in a peddling way, by responsible parties; but many times it becomes an "old settler." This winter I put some extra-nice white extracted honey in bell-glasses, in a first-class grocery, and it is there now, as white as lard and as hard. I sell almost all I produce, from the honey-house, to parties who know that I have a reputation to sustain, and could not afford to sell a spurious article.

A man came here recently for some honey for his baby, saying, "I did not want any of that stuff in the stores." That "stuff in the stores" is all right, for honey is too cheap to pay any one to adulterate it, and I do not believe that I could find any that is adulterated, in this market.

There are seasons when quite a quantity of extracted honey can be produced, when, if comb honey was the product sought, there would be a complete failure. The reason is this: Occasionally there will be a day or so when bees will work with a rush, and store nearly every cell, followed by an interim of days, and even weeks, when they will barely make a living. At the time of the blooming of the basswood in 1888, the bees had not a cell of honey, only brood. The flow from that source lasted only a day or two, passing like a cyclone, but leaving the cells all glistening with nectar. There was not time for the bees to build comb, as it occurred so suddenly, and the bees had been living on such slender rations that they were lean—not fat with wax, as is the case when honey has been coming in freely for some time.

The day that the flow of honey from basswood ceased, I was completely out of honey, having sold, that morning, the last ounce the honey-house contained. So I opened some hives, and removing the outside frames that were free from brood, took them to the extractor, and threw out the honey, having no uncapping to do. I put this new honey in the hot sun, and it quickly thickened and ripened, so I could supply my customers right along.

By the way, a producer should never be out of honey; let his customers believe that he, at least, is always able to supply their wants, and he in time will have no lack of customers; they will hunt him, in lieu of his hunting them.

It is well, during a continuous flow of honey, especially of clover or basswood, to secure all the choice white comb possible. During a continuous flow, I have had comb built, that was so very tender and delicate as to be almost imperceptible. I always let all colonies that are building comb during a flow, continue to do so, and never interfere with them in any way, only seeing that they have storage-room. Where I get extracted honey, is from colonies not building comb, and will not be ready to commence until the close of the flow. Where a colony has swarmed, and has been queenless for some time, their combs will be found to be solid with honey. These I extract and exchange for others containing larvæ, and both are benefited. I always have considered that my extracted honey cost me the most work and ought to bring as much per pound as comb honey, although most bee-keepers think differently, and sell it at wholesale in barrels, cheaply.

All comb honey that finds a ready sale in a city market, must be in one-pound sections, and both honey and wood must be of the whitest. The propolis must all be scraped from the sections, and then packed in new crates, with glass in one or both sides.

Those sections that are perfect in every respect, and very white, should be graded as "No. 1;" those as perfect, but not so light, as "No. 2;" and dark honey as "No. 3." All honey that is not perfectly sealed, should be sold in a home market, as knocking around in transit will not improve its appearance.

I do not think, as a rule, that double the amount of extracted honey can be obtained over comb honey. In some instances, perhaps, there may; but I am a "doubting Thomas."

Peoria, Ills.

GOLDEN-ROD

Considered as a Honey-Plant—Studying Honey Flora.

Written for the American Bee Journal

BY EDWARD TARR.

I was interested in reading what E. W. Councilman says on page 71, about golden-rod and white asters producing honey. I have kept bees here for nearly 20 years, and I do not think that my bees have ever obtained a single ounce of honey from golden-rod, while some bee-keepers here call all yellow fall honey "golden-rod honey." I have yet to see the first honey-bee at work on golden-rod in this county, although in the west part of this State I have seen them working lively on it.

Some eight or ten years ago, there was a heavy forest fire near here. The next year the purple fire-weed (*Epilobium Augustifolium*) came up all over the burnt territory, and the bees gathered large quantities of splendid white honey therefrom, for three years. The third year all of the low swales and swamps came up to selendine, from which, in the fall, the bees gathered lots of a heavy, thick, rank yellow honey. Some of the small bee-keepers called that honey "golden-rod," and one told me that he knew that it was all gathered from pumpkin blossoms!

The next year the fire-weed began to die out, and the selendine soon followed, and all of the drier parts of the burnt tract was covered with a weed called here, "poverty-weed," which I suppose must be the same plant that Mr. Councilman calls "white daisy." Now, while I have noticed the same plant in the western part of the State, observant bee-keepers there tell me that their bees do not work on it at all, while here they gather large quantities of a lemon-colored honey from it, but not as good as the golden-rod honey.

Now, as I understand it, there are many varieties of golden-rod, some of which (and perhaps all of them) in some localities yield honey in some years. Since I began keeping bees here, I have seen more than 100 persons go out of the business disgusted, and I will venture to say that at least 90 per cent. of them, never went a single mile to ascertain from what source their bees were getting honey. It seems to me that to understand the flora of our vicinity, is one of the first essentials of successful bee-keeping. I began keeping bees at first to get a little honey for family use, and afterwards I kept them for the profit of the business, and I have been successful.

Castle Hill, Maine.

NORTH CAROLINA.

Organization of the Carolina Bee-Association.

A number interested in apiculture met on Feb. 13, 1890, at the Chamber of Commerce, for the purpose of organizing a bee-keepers' association.

A. L. Beach called the meeting to order, and prayer was offered by B. C. Griffin.

Temporary organization was effected by calling Mr. E. W. Lyles to the chair, and making Mr. N. P. Lyles secretary.

In taking the chair, Mr. Lyles stated that the object of the proposed association was to encourage apiculture; that bee-keeping is neglected, and that, with proper attention, it would become one of the arts and industries of this section of the country. He spoke of the importance of organization, and of meeting together for the information of each other; that apiculture is a pleasant and profitable occupation, and the object of the association was to make it more profitable.

The meeting then proceeds to ascertain who would become members of the proposed associtaion, and 20 names were enrolled.

A permanent organization was effected by the election of the following officers: President, A. L. Beach, of Pineville; 1st Vice-President, C. E. Bost, of Davidson College; 2nd Vice-President, S. L. Klutts, of Clear Creek; Secretary, N. P. Lyles, of Derita; Treasurer, E. W. Lyles, of Charlotte.

It was decided that the association is to be known as "The Carolina Bee-Keepers' Association." A Constitution and By-Laws, similar to those governing similar organizations, were adopted.

At the afternoon session, subjects of interest were discussed.

The convention adjourned to meet in Charlotte on the third Thursday forenoon in March, 1890.

PASTURAGE.

Select Plants for Other Uses as Well as Honey.

Written for the Wisconsin Agriculturist

BY S. W. CHAMBERS.

The idea of planting for honey has been gaining ground in this country, and quite a number of bee-keepers now sow Alsike clover, buckwheat, sweet clover, and Chapman honey-plant for their bees. Even the Government has taken up the question, and sent out a great many pounds of seeds of honey-plants, and the inference is that bee-keepers will plant for honey in the future more than they have in the past.

But planting for honey alone will not pay, in my estimation, but when the clover or plants sown can be used for hay or some other purpose, there is indirectly a double profit obtained. The average colony of bees forage over thousands of acres of land in search of their sweets, and the bee-keeper could not calculate on more than 10 pounds of honey per acre from honey-producing plants. This would not pay any one for the trouble, unless such plants were grown that could be utilized for other purposes.

A man must expect at least $15 per acre for the use of his land, otherwise it would not pay him to stay in the farming business very long. Alsike clover and buckwheat are good honey-producers, and it would probably pay the farmer who keeps many colonies of bees to raise as much of this crop as convenient. Whole fields of such plants would give the bees quite a range, and plenty of sweets. This would be planting for honey indirectly, and it is probably the only way it can be done profitably.

Alsike clover is probably the best plant that can be sown for this double object. In soils adapted to its growth, such as moist land or gravelly loams, it is a profitable crop for farmers to grow. In many places it is grown to the exclusion of red clover. The Alsike is not "heaved" by the action of the frost in spring, as is red clover, and it is consequently good for pasture. It produces a profusion of blossoms of great value to the bees throughout the whole season. Alsike clover furnishes an aftermath in wet seasons. When cut for seed, if not allowed to stand too long, the clover, after being threshed, is equal to timothy for hay. As it will spread and take care of itself, there is probably no crop so valuable for waste places.

The idea of sowing honey-plants in small places, simply for the bees, does not seem to me to be a profitable undertaking. To be of any value there must be many acres of it, and then it should be raised with the idea of putting it to some other use in the end. Small patches might furnish honey enough to invite brood-rearing, which might, under such circumstances, prove detrimental.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Mar. 20.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj E. Rice, Sec., Boscobel, Wis.

May 3—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

A Pleasant, Open Winter.

We have thus far had a very pleasant, open winter in eastern Ohio. We have had but little snow, but a vast amount of rain and mud. Bees are in splendid condition; I looked at mine to-day, and I find in some colonies quite a sprinkling of young bees, and lots of brood in the brood-chamber. I wintered my bees on the summer stands, in Falcon chaff hives. I commenced the spring of 1889 with 32 colonies, spring count, and increased the number to 50, by natural swarming, hiving prime swarms only. All secondary swarms I put back in the old hive, by first catching the queen. I harvested 600 pounds of comb honey, taking this surplus off in the month of July, and put the bees down in the brood-chamber. They filled up the brood-chamber with honey from fall flowers, and are now very strong. I very seldom have to feed my bees in the spring. From present appearances, we trust that the present year will be a good one for bees and honey.

Jacob Oswalt.

Maximo, O., Feb. 18, 1890.

Experience with Carniolan Bees.

On page, 88, Mr. Staininger reports a fine yield of honey; that he obtained that amount of honey from 140 colonies of bees (spring count); also that he increased his bees to 235 colonies. That increase any bee-keeper would have expected, and could not well have avoided, with such a honey-flow as he had.

In regard to the Carniolans referred to by Mr. S.: Did they swarm more than the Italians? Previous to getting the Carniolans, I kept the Italian bees for 12 years; for the past 6 years, I have kept Carniolans, and I have never had them swarm more than the Italians did; nor have I ever had more trouble in controlling their swarming than I did with the Italians. I have had in three years, 2 Italian colonies in my yard, for the purpose of an experiment as to honey-gathering, and in both trials, they failed to come up to the average Carniolan bees, as honey-gatherers, by at least 35 per cent. This is a big difference, but I think that the drone-trap kept before them, had something to do with their not working well.

As to the Carniolans being cross: I have had but a very few bees among the Carniolans that were cross, and I could easily account for that. My experience in breeding has been, that to take an egg from a fine queen, and put it in the hive of a cross colony, to be fed and developed into a mature queen, will produce from that queen a cross colony of bees; and I can take eggs from a queen having a cross colony of bees, and put them in a gentle colony to be fed and matured, and those queens will commonly produce gentle bees. This matter I have given some thought, and have proved, to my satisfaction, in the twenty years passed among the bees. John Andrews.

Pattens' Mills, N. Y.

Honey from the Golden-Rod.

The golden-rood bloomed very profusely here the last fall; I watched it carefully, and found very few bees on it until the fall rains set in, then the blooms were covered by a little black beetle; but still the bees got their share. I counted from 5 to 20 bees on a single weed, and the store of honey was noticeably increased.

Hamlin, Iowa. James Moore.

Plant Basswood Trees.

As the valuable basswood from which we now get our best honey is so rapidly disappearing, I think that it would be acting the part of wisdom, if all who keep bees, especially, would plant as many young trees as they can, and they will in a few years have trees that money could hardly buy from them. Who can tell us how to grow them from the seed? I live by the woods, where many large basswood trees are among the forest trees, and although every spring I see thousands of the previous year's seeds start with the seed leaves on, yet never one of them ever lives to grow, and this occurs where no stock of any kind ever runs. C. F. Miller.

Faribault, Minn.

[To plant basswood trees will soon become a necessity—and it is excellent advice to recommend every one to plant lindens wherever it is possible to do so. To plant the seed is usually very unsatisfactory; it is better to transplant young trees from the woods, or to buy them from a nursery. In about five years they will bloom.—Ed.]

Bee-Escape and Its Use.

I have just read Mr. Eugene Secor's letter, on page 106, in regard to my bee-escape. From his closing paragraph, one might be led to think that I had not made the Eescape entirely free to the fraternity. All are perfectly welcome to make them—in fact, it pleases me to have them do so, and I hope it may be a great help to many an over-worked bee-keeper. Since bringing the invention out, however, I have been flooded with letters, asking for more explicit directions—often forgetting to enclose even a stamp for return postage, and asking innumerable questions. Some want patterns; while still others send from two to ten cents in stamps. Some have sent me samples of bee-escapes, which they had made, that were so imperfect that I very much doubt whether they would work at all. I cannot afford to do all this work for nothing, pay postage besides, and spend valuable time in making patterns, and sending them out.

I have now perfected patterns, and make all the escapes of tinned wire-cloth, soldered on tin, and made so that they can be instantly taken out of the escape-board from the top. I am desirous that all should have the benefits of this invention, and that all Escapes should be *made rightly.*

Milan, Ills. C. H. Dibbern.

Fine Weather for Bees.

The weather here is extremely fine; we have not had any ice of any account, and the bees have numerous chances for their flights. I shall watch them closely now, as they commenced to gather pollen the first of March, last year. O. R. Hawkins.

Bellport, N. Y., Feb. 13, 1890.

Bees Wintering Well.

Bees are in splendid condition—only one colony lost, so far. It was a poor season for honey last year, but I am looking for a good crop this year. I have more cells for honey than I can supply. It is very warm to-day, the mercury standing at 80 degrees. The bees are humming like they do in the mouth of June. Bees have wintered well in this locality, with very little loss; but spring dwindling is to be feared.

Wm. Anderson.

Sherman, Mo., Feb. 17, 1890.

HONEY AND BEESWAX MARKET.

DENVER, Jan. 27.—1-lb. sections, 13@15c.; Extracted, 7@8c. Beeswax, 20@25c. Market well supplied. Demand moderate.
J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Jan. 25.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Feb. 22.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 12@13c.; 2-lbs., 11@12c. Basswood 1-lbs., 11@12c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax—bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 13.—Honey is selling with more freedom than for some time, but prices remain at 12@13c for the best; 10@11c for what is not prime, and 8@10c for dark and buckwheat honey. Extracted is not so active, with prices at 7@8c for finest grades, and 6c for dark and off-color. Beeswax, 25c for yellow.
R. A. BURNETT, 161 S. Water St.

DETROIT, Feb. 10.—Comb honey is now quoted at 11@13c. The supply is not large; sales are slow. Extracted, 7@8c. Beeswax, 24c.
M. H. HUNT, Bell Branch, Mich.

BOSTON, Feb. 15.—Best 1 lbs., 16c; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Feb. 14.—Good demand for extracted honey, in glass jars, while demand from manufacturers is slow; it brings 5@8c per lb. Comb honey, 12@15c a lb. for best white.

Beeswax is in good demand at 20@24c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

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☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited.
J. N. HUNTER, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

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What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
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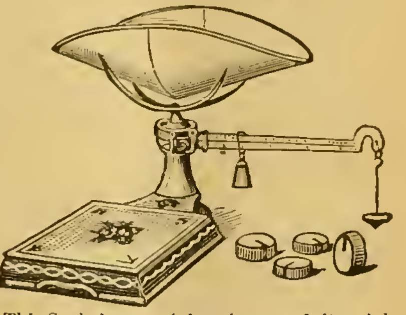

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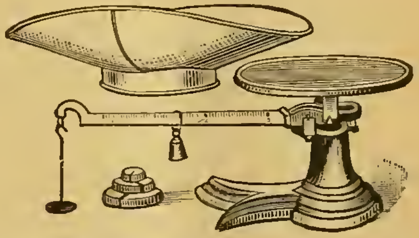

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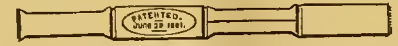

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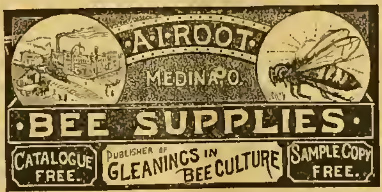
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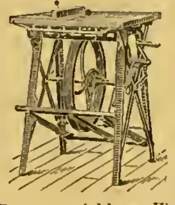

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

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CHAS. DADANT & SON,
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WE make the **best** Bee-Hives, Shipping-Crates, Sections, &c., in the world, and sell them the cheapest. We are offering our choicest white 1-piece 4¼x4¼ Sections, in lots of 500, at $3.50 per 1,000. ☞ Parties wanting more, should write for special prices. No. 2 Sections at $2.00 per M. Catalogues free, but sent only when ordered. Address,

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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON.
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. March 8, 1890. No. 10.

EDITORIAL BUZZINGS.

Keep a watch on your words, my brother,
For words are wonderful things;
They are sweet, like the bee's sweet honey—
Like the bees, they have terrible stings.

Our New Location, in the heart of the business district of the city, at No. 246 East Madison Street, brings us in direct communication with the several express companies, and we are conveniently near all the freight depots.

This location has made it possible for us to be more prompt than ever in filling orders, saving the long distance for hauling—which time can now be used for filling orders. Our friends will find it very convenient to call on us when in the city.

☞ Mr. Christian Weckesser, of Marshallville, O., was married to Miss Ella E. Long, at Williamsville, N. Y., on Feb. 16, 1890, the Rev. Eli Herr officiating. After the services a number of friends of Mr. and Mrs. Long, the parents of the bride, assembled at their home and partook of an excellent dinner. The happy couple will make their future home at Marshallville, O. The BEE JOURNAL extends congratulations to them, and hopes for a long *honey-moon*, extending all through life. Mr. Weckesser is one of our valued correspondents.

Not Sold Out.—The notice in last week's BEE JOURNAL that John Andrews had sold out his "Queen Business" is a mistake. He had only sold out all the stock of queens that he had wintered. His advertisement in this issue shows that he is still in the queen-rearing business at Patten's Mills, N. Y.

The Ohio State Convention, held at Cleveland, was a "right-royal meeting." Dr. C. C. Miller called on us on his return from attending it, and so reported it. Then Dr. A. B. Mason wrote us very nearly the same thing. He adds:

> President Boardman not being present at the time for calling the convention to order, the Secretary, Miss Dema Bennett, called it to order, and Dr. C. C. Miller was chosen as temporary chairman.
>
> There were 71 members present [and a goodly number not members], and several times I saw four, and occasionally five, rise at once to speak, and it took both Dr. Miller and Mr. Boardman to keep us straight. The next meeting is to be held at Toledo, and of course you will be on hand. We affiliated with the International. A. B. MASON.

We are glad to learn that there was such an excellent meeting, and that the Ohio State Society has affiliated with the "International American Bee-Association." That is the only way to make the International "representative" in fact as well as in name. Let all bee-societies affiliate at their next meetings.

The Lady bee-keepers are always welcomed both at bee-conventions and as writers in the bee-periodicals. Their presence is cheering and elevating at the former, and their articles in the latter are interesting and enlivening. Mr. J. W. Tefft writes thus concerning one who wrote four articles for the AMERICAN BEE JOURNAL last year—Miss Ida House—and we cordially invite her to write again, as she may have opportunity. Mr. Tefft says:

> I am delighted with the articles of Miss Ida House. They are so interesting that I read them over several times before I have, like the bee, extracted all the sweetness. If she knew how refreshing it was to get such articles, after poring over the heavy articles from the professional writers, she would write oftener. I should like to see something from her pen at least once a month.

Miss Ida House will be welcome to our columns as often as she chooses to write. She is the sister-in-law of Mr. William Lossing, a progressive bee-keeper of Minnesota, and has helped him in the care of his bees, for the past seven years.

The World's Fair, in commemoration of the discovery of America by Columbus, 400 years ago, is to be held in Chicago. The location is selected, but the time, and many other matters, are not yet decided upon by Congress. In our next issue we hope to be able to give full particulars, and invite the World to come and see the Great City of the West—and the greatest Fair the World ever saw.

Handling Bees.—This is the title of a nice pamphlet containing 14 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cents. For sale at this office.

From W. C. Lyman, of Downer's Grove, Ills., comes a new reversible frame similar to the Heddon reversible-frame, but the extra top-bar which holds the reversing frame, extends a bee-space above it, and is in two strips with a piece of queen-excluding zinc put into slots between them—the whole top-bar being wide enough to touch the next top-bar and make them close-fitting, when the hive is filled with such frames—thus preventing the queen from going into the surplus arrangement. If a reversible frame is not desired, this top-bar arrangement can be used on any frame. Mr. Lyman will test the matter during the coming season, and report the result.

Mr. C. H. Dibbern, whose perfected bee-escape was mentioned in his letter published on page 148 of our last issue, has sent us one inserted in a small piece of board, to show how to place it in larger boards. The bee-escape is not only perfected, but we might say it is "Perfection" itself! It is made of tinned wire-cloth, soldered on tin, and is made so that they can be readily taken out of the escape-board from the top.

Texas Spring Palace.—The grandest and most unique Exposition ever held in the United States, will exhibit to the world the wonderful and varied products of Texas, woven and arranged into most beautiful pictures, descriptive of landscapes and scenes in the State, at Fort Worth. The season will commence May 10, and close May 31, 1890.

☞ The farmers and bee-keepers of Newaygo county, Mich., held their fourth annual institute at Hesperia, Mich., last Wednesday and Thursday. Our friend, Geo. E. Hilton, is Secretary and Treasurer, and takes a prominent part in the discussions. A nice programme is on our desk.

New Catalogues and Price-Lists for 1890 are received from—

J. D. Goodrich, East Hardwick, Vt.—8 pages—Bee-Keepers' Supplies.

J. W. Rouse, Santa Fe, Mo.—4 pages—Bees, Hives and Poultry.

Christian Weckesser, Marshallville, O.—20 pages—Seeds, Plants, Bees, Queens, etc.

H. G. Frame, North Manchester, Ind.—4 pages—Bees and Queens.

John Gardiner & Co., Philadelphia, Pa.—100 pages—Seed Annual.

Z. De Forest Ely & Co., Philadelphia, Pa.—100 pages—Garden Manual.

J. W. K. Shaw & Co., Loreauville, La.—4 pages—Queens.

Joseph E. Shaver, Friedens, Va.—32 pages—Bee-Keepers' Supplies.

J. M. Shuck, Des Moines, Iowa—32 pages—Specialties in Apiculture.

F. A. Snell, Milledgeville, Ills.—18 pages—Apiarian Supplies.

J. T. Wilson, Little Hickman, Ky.—1 page—Italian bees.

GLEAMS OF NEWS.

The California Crop of honey and beeswax, for the past year, is set forth as follows in a circular just issued by Schacht, Lemcke & Steiner, of San Francisco, Calif.:

> The crop of honey in 1889 was not as large as in the previous year, but nevertheless, sufficient quantities have been produced so that no scarcity has been felt during the season, and, even now, we have sufficient honey on hand for our demand; as the same has not been a very active one for the export trade that generally has absorbed large quantities in previous years.
>
> We estimate the crop in California for the year 1889, at 2,000,000 pounds of extracted honey, and 200,000 pounds of comb honey, or a total of 2,200,000 pounds for the year 1889. Comparing this year's production with former seasons, the result is not a very favorable one, as California produced in 1888, 3,500,000 pounds; in 1887, 1,200,000 pounds; in 1886, 5,000,000 pounds; in 1885, 1,250,000 pounds; and in 1884, 9,000,000 pounds, or an average of nearly 4,000,000 pounds. It is difficult to approach again the amount produced in 1884, for the reason that a great deal of land is now cultivated, so that the bees had to be removed further and further back into the mountains.
>
> The prospect for the coming season is so far a very good one. We have had an abundance of rain, and if we should get some rains again in March or April, to keep the different kinds of trees and flowers in blossoms, we will probably have a larger yield of honey than we have had since 1884. However, nothing certain can be said now, as a great deal depends upon the weather we will have during the honey-producing months, which are in particular May, June and July.
>
> Statistics show that in Europe the supplies are very short, and that also very little honey is on the way from here to Europe. In the East, the stocks of honey are also limited, and in California, we have no more honey on hand than will be needed for the local consumption during the remaining season, as we will have no new honey before June or July, with February, March and April before us, in which months generally a great deal is consumed.
>
> The quality of the honey has been choice, but only little white honey has been produced, and in consequence, a good many orders for white honey could not be filled.
>
> For comb honey the demand has not been a very active one, but comb honey in one-pound sections sells much better than honey in two-pound sections, and very little comb honey in two-pound sections should be produced in the future. Eastern buyers do not wish to buy it at all, and also the local demand calls now particularly for honey in one-pound sections.
>
> The average price for extracted honey during the last year has been 6 cents, and for comb honey 12 cents in one-pound sections, which prices we leave unchanged at the present time. Although some extracted honey has been sold as low as $5\frac{1}{2}$ to $5\frac{3}{4}$ cents, these prices are too high for export, and apiarists must be prepared to see lower prices in the coming season, particularly if we have a good crop. If prices rule higher than 4 to 5 cents, business of importance cannot be done with Europe, for the reason that other kinds of honey will be taken if prices for California are higher.
>
> The production of beeswax has been small in the past year, we estimate it at 30,000 pounds against 40,000 pounds in the former year.

Marion Harland, the friend and helper of women everywhere, has taken up the work of restoring the ruined monument marking the burial-place of Mary, the Mother of Washington.

One hundred years ago this venerable woman was interred in private grounds near Fredericksburg, Va. In 1833, the corner-stone of an imposing memorial was laid by President Andrew Jackson. A patriotic citizen of New York assumed the pious task single-handed, but meeting with financial disaster, was compelled to abandon it.

Marion Harland says truly—in her appeal to the mothers and daughters of America, to erect a fitting monument to her who gave Our Country a Father—that "the sun shines upon no sadder ruin in the length and breadth of our land, than this unfinished structure." See page 67.

The publishers of "The Home-Maker," issued at 19 West 22d St., New York, of which Marion Harland is the editor, offer, as their contribution to the good cause, seventy-five cents out of every annual subscription of two dollars to the Magazine sent in during the next six months. Every such subscription must be accompanied by the words, "*For Mary Washington Monument.*"

The offer is generous, and should meet with an enthusiastic response.

Yellow Jessamine.—Mr. W. M. Crutcher, of Zellwood, Fla., asks the following question:

> DEAR EDITOR:—Will you kindly inform me whether honey gathered by bees from blossoms of the yellow jessamine vines is poisonous, or in any way injurious for eating? I am a beginner in bee-keeping, and a large jessamine bush, in close proximity to my hives, is now in full bloom, and the bees are gathering honey and pollen from it.

This bush is found on sandy soil at the South (*Gelsemium sempervirens*); its common name being "yellow jessamine;" it is not very desirable to have within range of the bees, especially if they are Italians; while the native bees very seldom are seen on it, Italians get both honey and pollen from it, but mostly the latter. The young bees, after taking their first meal on these flowers, will have distended abdomens, and will act as though they were intoxicated. They usually crawl out of the hives, and very soon expire, unless prevented from going out by being overcome by the strength of the poison. Many of our Southern bee-keepers have had sad experience on account of their proximity to this plant. While the honey is not very detrimental to the human stomach, it is not very agreeable to the palate.

A Smart Little Boy in Georgia, who was kicked by a mule, instead of saying naughty words, or going home crying to his mother, tied the mule within five feet of a bee-hive, backed him round to it and let him kick.

☞ A correspondent in the *National Stockman* lately wrote a very foolish article on queen-bees, showing that he knew nothing of the subject on which he wrote. Dr. C. C. Miller gave a criticism of that article in last week's *Stockman*. Among other things he says:

> The idea that "the old queens die off in May or June......and as soon as the queen dies, the workers commence rearing queens; that when they come forth, swarms begin to come off," is certainly not borne out by the facts. On the other hand, queen-cells are started in the majority of cases while the queen is present and laying in the hive, and the queen which has done so much laying instead of dying in May or June, leaves the hive with the swarm, perhaps to repeat the same thing the following year.

The silly nonsense which obtains a place in some agricultural papers, is astonishing. We are glad that Dr. Miller has paid his respects to at least one of that class of writers.

Remedy for Coughs, Colds, etc.—Among the many recipes in which honey is used for curing diseases of the throat, lungs, etc., is the following, which is recommended as an excellent remedy for coughs, colds, sore throats and hoarseness:

> Boil two ounces of flax-seed in a quart of water; strain this, and add to it one-half pint of honey, two ounces of rock-candy, or lump-sugar, and the juice of two or three lemons. Boil all well together, and bottle or can it. The dose is one little tea-cupful, hot, before going to bed; and a wine-glassful before meals. Drink it as hot as you can.

Every Person who has a life-insurance policy, or who expects to take one, will be profoundly interested in a series of articles now being printed over the signature of "The Hermit," in "Frank Leslie's Illustrated Newspaper." The pictures in Leslie's last week are all excellent. They include pictures of wonderful ruins of Prehistoric Colorado, and several illustrations of important foreign events.

Trifet's Monthly Galaxy of Music, published at 408 Washington Street, Boston, Mass., presents an excellent monthly installment of songs and instrumental music. The February number contains the piece "Winsome Grace," a most beautiful schottische by Boston's best known teacher, Prof. T. H. Howe. We will club it with this JOURNAL, and send both for $1.75.

The Figure 9 has been in our dates for over a year, and will stay with us for over a century, replacing the 8. No one now living will ever date a document without using the figure 9. Last year it stood on the extreme right—1889. This year it is in the third place, where it will remain ten years. It will then move up to the second place—1900—and there it will rest for one hundred years.

A Lecture on Fraud.—On page 115 we noted the fact that the *Prairie Farmer* had published Lizzie Cotton's advertisement, and remarked that Mrs. Harrison, who conducts the Apiarian Department in that paper, should give a lecture on fraud. Well, she did, and here it is, copied from last week's *Prairie Farmer:*

Why, Lizzie, you are wonderfully toned down in your advertisement. Honey is so cheap you don't make fifty dollars per hive for every colony in your yard, as you used to do yearly (on paper). It is too bad, isn't it? If I had such valuable stock as you have, I would not sell nary bee; no, not one. But then, twenty dollars for a few bees in a box, minus a queen, is not to be sneezed at, any day. Your "New System of Bee-Keeping" is not to open a colony purchased of you for two weeks, for in that time the bees will have reared a queen.

"Money can be made keeping bees. In nearly every family there is some one who could keep bees on *my plan*, and secure a handsome yearly income." How is your plan different from all the bee-keepers of the world, who tell all they know—and more too—without money and without price? How about that wonderful bee-food, the recipe for which you charged so much, the slippery elm one? You remember it, do you not? Do you have it incorporated in your "Illustrated Book of Information, Free?" You never sent me your book, as many other authors have done; O, no; you are not green enough for that, but Prof. J. B. Turner, of Jacksonville, Ills., did with his compliments; here it is verbatim:

> Can you not, through the *Prairie Farmer*, help to expose this transparent fraud? I am tired of receiving her circulars. I learn of many cases in which money sent to her has been cabbaged without any return whatever. If she wishes to do any honest business, why not send her things C. O. D.?
>
> Jacksonville, Ills. J. B. TURNER.

Mrs. Lizzie E. Cotton, of West Gorham, Maine, has received more attention from the editors of bee-periodicals, than any bee-keeping woman in our land; and she is many times the sole occupant of a column devoted to exposing humbugs and swindles. Mrs. Lizzie does not wear a bustle or bangs; O, no! but coat, pants and vest, and is known as Mr. Cotton, away down in Maine.

When I was attending the Exposition in New Orleans, and examining the inventions of women, my eye caught a pine box with a huge placard tacked to one side with the inscription, "The Controllable Bee-Hive and New System of Bee-Management." It was no hive at all; there was not a frame in it; without cover or surplus arrangement. There was a bright bee-keeper there who had charge of an exhibit from one of the parishes of Louisiana, and she went to the manager of that department and had the box removed, for there was nothing in it to be called an invention.

The cheek! to get her advertisement inserted in the *Prairie Farmer* after she had been exposed in its columns as a swindler years ago. Many persons who could ill afford the expense, have been sent useless lumber by express, costing large sums. All who send her money may expect to be treated as the spider did the fly.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cts., postpaid.

QUERIES and REPLIES.

Ripening and Re-Liquefying Extracted Honey.

Written for the American Bee Journal

Query 691.—1. In placing extracted honey in open vessels to ripen, does it impair to any material extent, the essential oils that give to comb honey that exquisite aroma and sparkling flavor so delightful to the taste? 2. Does heating granulated honey in order to re-liquify the same, destroy any material element of its natural flavor?—Ohio.

1 and 2. Not to any appreciable extent.—J. P. H. Brown.

1. I think not. 2. Not unless it is over-heated.—Eugene Secor.

1. In open vessels, yes. 2. No, not if properly done.—Mrs. L. Harrison.

1. I believe it does, to some extent. 2. Not unless it is heated more than is necessary to liquify it.—A. B. Mason.

1. I do not know. I doubt if it does. 2. Generally it does, because heated too rapidly and too much.—C. C. Miller.

1. I hardly think so. 2. Not if the vessel containing the honey is placed in water, and brought to a gradual heat.—J. M. Hambaugh.

1. Prof. Cook says "No." 2. If you heat it too hot, it will destroy the fine flavor.—H. D. Cutting.

1. We think not. 2. Not if done carefully, *au bain-marie*, on a very slow fire; but it is very easy to damage it with too much heat.—Dadant & Son.

1. No—unless the honey was too thin when extracted. 2. Not if done in a water-bath, at as slow a heat as possible.—P. L. Viallon.

1. I think that it does. Extracted honey, no matter from what source, in time tastes simply sweet, and that is about all. 2. No, if it is not heated too highly.—C. H. Dibbern.

1. Indeed it does not—at least here in Michigan. 2. Not if gently heated. Care should be exercised not to over-heat it.—A. J. Cook.

1. It is not easy to determine the force of the words "to any material extent." Extracted honey loses flavor by exposure to the air. 2. The flavor is still more impaired by heating.—M. Mahin.

1. It loses none of the flavor which it has when extracted. The flavor of thin honey is not as good as that left in the hive for a month or two. 2. Not unless heated too hot.—G. M. Doolittle.

1. I think that it does. If there is any advantage to be gained from extracting unripe honey, I have yet to learn it. 2. Put the vessel containing the honey, in water, and then heat. No injury results from liquifying honey in a water-bath.—G. L. Tinker.

1. Not if placed in a clean room, and properly cared for. 2. Not unless heated to too high a degree of temperature; all that is required, being to simply liquify the honey.—J. E. Pond.

1. Yes. 2. No. Uncap comb honey and expose it to the air, and it soon loses, in a large degree, that quality which makes it desirable as honey. While extracted honey of good quality is superior to all the syrups, it will always be considered as belonging to them, and classed with them.—J. M. Shuck.

In the first place, my honey never needs "ripening." What a word to apply to a fluid! But the querist is not responsible for introducing it into our current bee-literature. I do not remove the honey from the hives until it is thoroughly evaporated by the bees. By a proper application of the "tiering-up system," I gain both in quantity and quality of honey. 1. Certainly, it does. All the samples of artificially-evaporated honey that I have kept in my collection of samples, have proven to be poor stuff. 2. Granulated honey can be reduced to the liquid state without perceptible loss of flavor, if properly done.—G. W. Demaree.

1. No. 2. Yes, if heated too much. Place a vessel of water on the stove, and put the vessel containing the honey in the water, keeping it from touching the bottom of the first vessel by putting sticks between, and heat the water to a temperature not to exceed 150 degrees, when the honey will be slowly liquified without injury—R. L. Taylor.

1. No, it does not impair the essential oils, and the essential oils do not get away. Let me tell you what takes place: You would not put the honey in an open vessel to ripen, if it was not too thin. It contained water which you wanted to get rid of. This water will not evaporate unless the temperature is well up. With this temperature up, and with this surplus water which you wish to get rid of, bacteria are produced; in other words, fermentation takes place just a little. Had you added plenty of water before you began the open-air ripening process, vinegar would have been the result before the ripening took place. As it was, your honey went towards the vinegar state just a little, and took on the sharp twange which cuts in the throat, and gives you the impression that the essential oil is gone. Do not think you can keep up a demand for your extracted honey and ripen it on the open-air plan. Let it be well ripened by the bees before you extract it, then screw it up air-tight, and keep it in a cool place. The cool places are damp, because they *are* cool, but that will not hurt the honey if the can is screwed up air-tight. 2. If it granulates, heat it slowly back to liquid, and you will not injure it. No one will ever be able to tell that it was granulated and then re-liquified.—James Heddon.

1. The air will ripen honey when it is too thin, without injuring it in the least. 2. Heating granulated honey, to liquify it, dones no injury, if it is slowly done in an outer kettle of water, and not burned.—The Editor.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey—Its Production and General Use.

Written for the American Bee Journal

BY J. F. LATHAM.

With the steadily increasing utilization of honey in the many useful branches of the arts to which it is applicable, and for which no other product of human industry is so well adapted, it is becoming more apparent every year that, to meet the public demand, it must be supplied to the trade freed from the comb—extracted. In no other condition can honey be made to fill the numerous places, in response to the present rapidly-developing uses as an aliment; or the many ways by which its virtues prove to be serviceable, medicinally, for which it is needed.

In order to bring extracted honey to the notice of the general public, many obstacles that now retard its introduction, require attention from the producer. Although it is an established fact, that honey extracted from the comb can be obtained by the bee-keeper at less expense than honey in the comb, the fact is no less prominent that the present trade excess of the latter over the former, is detrimental to the sale of extracted honey, as it leads the uninformed consumer to conclude that honey out of the comb is intrinsically less valuable than honey in the comb; and that, too, in the face of the fact that the constituent elements of honey are alike in both conditions.

In working for honey that is to be extracted, and in placing it upon the market within the reach of the consumer, it should be the first and paramount object of the producer to so mold his efforts as to result in obtaining and supplying his patrons a first-class article.

Honey is very susceptible to any flavor foreign to its own, and when mixed with the other substances, of even a slightly unpleasant flavor, the compound will be very nauseating to a delicate taste. This leads to a nice discrimination, making it an important preliminary object to supply the bees with receptacles that are free from any odor that will impart a dileterious effect to the nectar that may be stored in them. Combs that are allowed to get moldy, or those that have been stored away with honey adhering to them (as is often done after extracting at the close of the season), and allowed to remain until put upon the hives for use again, are apt to be in an improper condition for receiving the nectar that is to make the limpid honey that should be drawn from the extractor.

SEPARATING THE VARIETIES OF HONEY.

Another item of importance, is that of keeping the honey from various blooms separate, or as nearly so as it is convenient to do. Perhaps this statement may be deemed somewhat extreme by those of extensive experience, but nevertheless I am prone to the belief that the pungent flavor which honey retains from the apple, golden-rod and aster blooms, when mixed with the delicate-flavored honey from the raspberry and white clover, make a compound inferior in flavor to either of the former when separate; the mixing seems to develop a condition, which for want of a more precise term, may be called ferment, culminating in a substance that but slightly resembles either of its components in flavor, odor, or, eventually, gravity.

RIPENING EXTRACTED HONEY.

If it is desirable that honey should retain the rich, mellow flavor so agreeable to a refined taste when used as an aliment, the ripening process merits a special share of attention from the producer. The contrast experienced in eating a ripe, rich, mellow apple, and one of the same kind of fruit at the plucking, is very striking; but however rough this comparison, it is a very fair similitude of what may be experienced in eating honey as soon as it is capped, and after it has remained on the hive, in bright combs, six months or a year. It is not to be inferred from the foregoing that the bee-keeper can allow his honey to remain on the hives half a year, or more, to receive a thorough ripening, but the fact is none the less apparent, that an improvement is enhanced by so doing, that adds to its eating qualities.

The richest honey that I ever used, was obtained from the broken combs of a small after-swarm that was hived in a box, and united with a queenless colony in the fall, by placing over the brood-apartment, and transferred the spring following. Others who were so fortunate as to get a taste of that honey, were enthusiastic in its praise.

BROOD-COMBS FOR EXTRACTING.

Brood-combs containing pollen are not fit receptacles for nectar that is destined for honey that is to be extracted. Pollen that remains in the brood-apartment two seasons, is apt to decay, and when in an advanced stage of decomposition, it imparts a very disagreeable flavor to honey, when thrown from the combs, and mixed in the extractor; even to a degree that it would be difficult to decide a use to which it might be applied; it certainly is not a food suitable for man, neither is it fit for bees at any season of the year, although it *may* be fed in small quantities at a time, after having been boiled, without injurious effects, when they can fly frequently.

Radically speaking, it is an unwise procedure to put honey on the market, that has been extracted from the brood-combs, in receptacles that will carry it to the table of the consumer—very few there are who will declare it a food "fit for the gods," after once testing its merits. If the "out" qualities of extracted honey do not rank among the extremes, it is as good for some medicinal and manufacturing purposes, or even the minor grades of cooking, as the better qualities.

HONEY-RECEPTACLES FOR MARKETING.

After extracting and ripening, comes the preparation of honey for the market, bringing to the front the choice of shipping receptacles. Here, again, care must be exercised that the fine qualities of superior honey are not injured.

Glass is the best material in which edible honey can be put. Honey-receptacles are the acme of perfection when made of glass.

Tin may be superior to glass for shipping purposes when quantity, and safety of contents are considered; but there is a chance for the contents to be injured by contact with the metal surface, when the surface contains more lead than tin—the acid in the honey and the lead in the tin (?) not compounding an agreeable assimilation. Perhaps some of the reported bad effects experienced from eating extracted honey may have originated from that source. Who knows? There are chemists in the bee-keeping ranks eminently qualified to investigate this point to a certainty, and should it prove a reality, it seems that caution should be exercised, when preparing honey for shipment, to guard against inadvertencies from that direction.

Extracted honey can be kept two years—perhaps longer—in unwaxed kegs, made of staves riven from the heart of white-oak, without any perceptible change in its flavor. It seems that other woods—the heart of old growth spruce, poplar, and Norway pine, of the North; tulip and cypress of the Middle and Southern States—in short, any kind of lumber that will not impart its flavor to any liquid coming in contact with it, or produce acidulation (as would result in using red-oak, birch, or maple, without waxing), would meet the same purpose.

Honey put into receptacles that are sour, is sure to absorb the acid, causing fermentation, particularly when stored in damp rooms. When used for making vinegar, sour honey will "fill the bill," but when used for cooking, and in *most* medicinal preparations, it behooves the apiarist to guard against the many evils that may result from supplying other than a prime article, if he desires to maintain the present increasing demand for his product, and raise it to the dignity of a staple article.

When well-flavored extracted honey is put upon the market in a way that its purport is assured, the confidence of consumers will be fortified to the extent that the odium of adulteration will become a secondary consideration. With the abundant supply of extracted honey at all times upon the market, at prices that place it within easy reach of any reasonable consumer, there seems to exist no cause for its adulteration, unless it be the promptings of a genuine infatuation to damage the interests of an honest industry; and wrong without the least shadow of a cause; to put it a little more forcibly—the result of habitual malignancy! To charge the crime of adulteration to any particular class who are concerned in the production and handling of extracted honey, would be unjust, as the "cranky" habit of mixing is too deeply inured in the intricate mechanism of productive and commercial doings to admit of being classified. The comparatively low price to which extracted honey has fallen, has, in a great measure, check-mated the adulterator of that product.

As the mixing process by which extracted honey is adulterated, is mostly performed after it leaves the possession of the producers, as I am informed, an effort on their part to wholly prevent adulteration would be futile. The somewhat uncertainly defined adage, that any person has a right to do what he pleases with his own, looms up in opposition to inter-meddling from others.

There seems to be one way by which the much-to-be-desired result might, in a measure, be accomplished, and that would be an association of producers and their factors, having for its object the control of the preparation and sale of honey; guaranteeing the contents of all receptacles by a trade-mark, authorized only by the association. Could such, or a kindred procedure, be consummated, the association could, when desirable, invoke the National authority for support. When this is done, extracted honey will come to the front, where it now occupies a place on the back-shelf, under the counter, or some other out-of-the-way place, unseen by many would-be consumers.

EXTRACTED HONEY AS A SWEETENER.

With the great majority of sugars, syrups, and confections, represented by authority to contain ingredients that render them noxious food substances, there appears to be no excuse for replacing them with honey, which, when handled as suggested in the foregoing, can be no other than the purest sweet obtainable. There are but few household requirements that honey will not supply, where a sweetening substance is needed; in fact, so broad is its theatre of usefulness, as an article of domestic economy, that no family with a supply of extracted honey need make use of any other sweetening. When the price of "strained" honey ranged from 30 cents to 50 cents per pound, its trade-value placed it beyond the reach of the poor, and often those of moderate means; but now when *extracted* honey, from the favorite blooms, can be obtained plentifully at from 8 cents to 12 cents per pound, there is no expediency for neglecting to use a pure, health-giving sweet, in place of those of doubtful reputation.

West Cumberland, Maine.

Strange, Sad and Sweet.

"Three things are *strange* to me:
The kiss of the west-wind's breath,
The wonder of life and death,
And the thoughts that the future hath.

Three things are *sad* to me:
The earth on a new-made grave,
The sob of winds in a cave,
And a heart that never gave.

Three things are *sweet* to me:
The song of a bird that flies,
The blue of the summer skies,
And the light in a young wife's eyes."

—*Campbell.*

SEPARATORS.

Superiority of Sliced Wood Separators Over Others.

Written for the American Bee Journal

BY CHARLES R. ISHAM.

On page 101 is a question on "Making wooden separators." Some of the replies given are so at variance with the experience of myself and honey-producing neighbors who have been extensively using sliced separators for the past several years, that I think it may be interesting to mention a few facts which have been fully confirmed by years of practical use in producing large crops of comb honey for the wholesale city markets.

I believe that I was among the first to use and bring to the notice of honey-producers the utility of sliced wood separators; also to advocate their preference to tin for this use in the apiary.

When my attention was first called to a sliced board of proper thickness, I was at once convinced of its practicability, and in partnership with a friend, we made them for our own use, besides furnishing considerable quantities to others, all of whom, so far as I know, were well pleased with their utility.

The editor, and perhaps some of the readers of the AMERICAN BEE JOURNAL, may recollect of my writing several articles some years ago, advocating the use of wood separators in preference to those cut from tin. Among the reasons then advanced were, that they were warmer, cheaper, lighter, and when cut 1-16 of an inch thick, or 16 to the inch, they gave a better entrance to the sections; that later in the season the bees would travel on them instead of the combs, in passing from the lower to the upper cases.

By practicing what we call "cleating the separator," sections without any insets can be used and filled with comb flush to the edges all around. In no other way can this be accomplished only by using board separators about one-fourth of an inch thick.

When cut from well-seasoned, live, cured lumber, they do not warp or split to any amount to speak of, and are tougher than sawed ones, as the process of steaming and drying gives additional strength and hardness to the lumber.

The machine that we first used, cut them with a twist, but we never slice them with a straight cut, so that when clamped and dried, there are about as flat as a board, and equally as desirable and convenient to put in place as tin.

What has had a great tendency to bring them into disfavor, is a quality of cheaper make, cut by basket machines from unseasoned lumber, which have given dissatisfaction, and have been the means of quite a number discarding their use entirely.

When I first commenced to use wood separators, I had a large quantity of tin ones on hand which were soon discarded and laid to one side. I have some thousands cut from wood, which I have had in use from the first we made, which are, though stained, just as good as they ever were, and it is the exception to find one which has been badly gnawed by the bees. I do not know of any apiarists in this part of the country who are now using those made from metal.

All the sections I now use are dovetailed and sliced; we also slice the thin boards for shipping-cases, at a great saving of lumber.

I consign, by freight, most of my honey to commission men in the large cities, and generally obtain very satisfactory prices. The cleaner and newer a section looks, the more attractive is its appearance, and my experience is, that after a section has gone through the process of being filled—no matter how smooth it may have been sand-papered—when put upon the market it does not look any better than those which were steamed and sliced; for, if anything, a polished section against it is ready for market, is more susceptible to stain, and does not look any fancier or better to sell the honey for enough more to make up the difference in cost.

Honey-producers may as well recognize the fact, that the time has gone by for obtaining fancy prices for honey, as it has become a staple rather than a luxury in our city markets. The least expense we incur for fixtures in the apiary, and in shipping its products to market, the better we will be prepared to meet competition, and make the industry a paying and profitable pursuit.

BEE-SCIENCE.

What is Honey? It is Not Digested Nectar.

Written for the American Bee Journal

BY D. MILLARD.

Science, says Webster, is knowledge reduced to system; knowledge which gives a positive statement of truth. An analysis of science would be expressed somewhat thus: Fact, 99; system, 1—total, 100; just system enough to hold the facts together.

Facts are deduced from theory, and are tested by time and practical experience, and any theory that cannot evolute itself up through this test, must remain a theory. Presumptions, surmises and probabilities are only crude theory—not an atom of science about them; and apicultural science, to be a science, should have no exceptions to the above rule.

In the preface to a little volume called "Cook's Manual of the Apiary," edition of 1879, the author says: "I make no apology for inserting so much of science in the following pages...... I am convinced that the people are mentally hungry for just such food." Yes, and I ate of it myself, with avidity, and for years I have cherished a high respect for that author and his writings.

On page 104 of that "Manual," the author says:

> And what is honey? We can only say that it is a sweet substance, gathered from flowers and other sources, by the bees. We cannot, therefore, give its chemical composition, which would be as valid as the source from which it comes. We cannot even call it sugar; for it may be, and always is, composed of various sugars; and thus it is easy to understand why honey varies so much in richness, color, flavor, and effect upon our digestion. In fact, it is doubtful if honey is a manufactured article at all. It seems most likely that the bees only collect it......and store it up, that it may administer to their and our wants.
>
> To be sure, some writers contend that it undergoes some change while in the bee's stomach; but the rapidity with which they store, and the seeming entire similarity between honey and sugar fed to them, and the same immediately extracted from the combs, has led me to believe that the transferring power of the stomach is very slight—if it exists at all.

In the foregoing, the writer does not take positive grounds, yet his views upon the subject appear to me to be just as consistent with known facts of to-day, as they did ten years ago.

ACID FOUND IN HONEY.

But as bee-culture advanced, and honey came more into general use, its chemical properties became better understood by many who discovered what was previously known by a few—that honey proper contained an acid that did not exist in nectar as secreted by the flowers—a fact not mentioned by Prof. Cook in his "Manual," but one which has for the last few years caused much speculation as to its origin.

At the convention held in Detroit, in 1885, Prof. Cook said: "No one knows how or when the acid gets into honey;" thus assuming that it is in some way added. It was then and there stated as a belief that formic acid was placed there by the bees during the capping process, which was carried on by the use of their tails, the stings being the best polishing-tool. A statement from Father Langstroth made there at that time, about the ripening of honey, should be read and remembered by every honey-producer in the land.

Some three years ago I inserted an empty comb in a hive during a honey-flow; in about two hours it was taken out, and the newly-gathered honey, shaken out into a cup, into which I introduced a coil of polished steel wire, and after an exposure of over an hour, it showed no perceptible signs of corrosion. The same placed in a cup of old honey, blackened in a very short time, thus proving the presence of acid in the ripened honey.

The litmus paper test will prove the same thing; but neither test proves how it gets there. Acid is a natural inheritant of all vegetable sweets. Nectar is a vegetable sweet, and the only source of pure honey.

THE RIPENING OF HONEY.

If nectar could be gathered from the flowers as fast as secreted, and immediately subjected to a temperature of 150°, Fahr., it would be converted into cane sugar, or nearly so; but this the bees are unable to do—they can subject it to no higher degree of heat than the interior of the hive. This they do, and at the same time it is excluded from sunlight: for when evaporated at a low temperature, sunlight hastens fermentation, which increases the proportion of acid; so that the process is in part that of a slow evaporation, and partly a curing process similar to that of wine-making, differing in that the material is more dense, and, as the density increases, fermentation decreases until it reaches its equilibrium; it is then in a condition to cap; so that the process is a combined one, properly called "ripening."

HONEY NOT MADE FROM SUGAR.

Sugar syrup fed to bees will be acted upon in precisely the same way, the length of time required varying proportionately with the density of the material and the degree of heat. During the process it is confined to the inner atmosphere of the hive; in close proximity to, or mixed in, the cells with honey and pollen, and all warmed by the heat of the bees' bodies; it becomes, in a measure, assimilated to honey, *i. e.*, it has a similar taste and odor; but easily distinguished by any one familiar with pure honey.

Sugar syrup, or honey digested in the bees' stomach, would be assimilated to the bee's body, and converted into chyme, to be used as such, or further converted into blood to form tissue.

Maple sap exposed to sunlight and a warm atmosphere, will soon sour; but if taken fresh from the tree, and rapidly evaporated at a high temperature, it will make good sugar that will granulate, whereas in the first case it would only make a syrup that might be called "maple glucose," *i. e.*, it would have a maple flavor, but could not by any process be convertible into sugar that would granulate. Much of the so-called maple syrup found in the market is of that kind—purely maple, but not properly produced.

In Prof. Cook's article on page 647, of the AMERICAN BEE JOURNAL for 1889, he fails to make any discrimination between a degree of heat that would only induce fermentation, and one that would rapidly evaporate; neither does he mention any difference in the results. By making separate tests, and a proper continuation of the two degrees of heat, followed by cooling, maple sap would be converted into sour sap, or granulated sugar; cider into vinegar, or a dense substance known as "boiled cider;" sugar syrup into sour syrup or granulated sugar; nectar into sour nectar, or cane-sugar; or, if fermentation be stopped at the proper stage by excluding the atmosphere and confining the gasses, the result would be a wine; but if left to the bees, they would, by a combined process as above described, ripen it into honey.

THE GLANDULAR SYSTEM OF BEES.

On page 375 (1889), Prof. Cook seems to have either made a new discovery of bee-glands, or Nature has of late been making some new additions to the glandular system of the bee; at least it is new to me, and I thought myself familiar with all the Professor's writings on the anatomy of bees; however, if the Professor is sure that he is correct, I can only say that so far as the glands are concerned, I have neither the desire, nor the evidence, to justify me in refuting his statement. I was greatly surprised, however, that he should make such a discovery at this late day, and still more so at his supposed functions of the aforesaid glands.

"The probable function of the secretion of those glands," says Prof. Cook, "is to digest the nectar—to change the cane-sugar of nectar to grape-sugar of honey;" and then states positively, that "all honey is partially or completely digested nectar." This would seem like getting from probable to positive, without much consideration. Now it seems probable that that probable function led the Professor to believe that probably that secretion was an acid, which still further led him to believe that probably the œsophagus or honey-sac was probably a digestive organ, and probably lined with proclain with an acid as a digestant, *positively*.

Let me repeat: Acid is an inheritant in nectar, and all that is required to produce it is warmth, and this the bees are able to furnish—but they do not digest it!

BEES SUBSISTING ON DRY FOOD.

Nature has provided the human mouth with saliva glands, whose functions are to secrete a fluid to moisten, and thus to aid in preparing for the stomach such food as dried meats, bread, crackers, etc; but we do not need them when we eat green fruit, soups, jellies, etc.; neither do they act on such occasions—Nature did not intend that they should. These glands do not secrete an acid, nor a digesting fluid—only a saliva to assist in preparing dry food for the stomach—the gastric fluid attends to the digesting after it gets there, and is furnished by the glands of the stomach.

It frequently happens that bees get access to dry sugar; or suppose a colony of bees in the early spring is out of stores, but finds a hive or tree in which the bees have died, and left an amount of honey that is cold and granulated; it is theirs by right of discovery, and their main source of supplies to reproduce themselves. Will they load it into their honey-sacs in dry chunks, and take it home in that condition? No; it is not their way of doing business. The salivary glands will be called into action to dilute it, and it will then be passed into the honey-sac, and taken to the hive. Those glands that lead down to the base of the tongue being also water or salivary glands, will immediately act and still further dilute, and make up for loss during transition, and to aid in regurgitating.

A small portion, perhaps, will be passed to the true stomach below, for the body's use; the main bulk will be deposited in cells near the brood. It is not digested, but diluted with saliva, and thus it is in a condition to *be* digested by the nurse-bees, and, in time, will all be used in brood-rearing.

NECTAR—NOT DILUTED OR DIGESTED.

But fruit-bloom opens, and the field-bees or honey-gatherers fill their sacs with the pure nectar; it is thin and watery, and needs only evaporation. The saliva glands are not excited to action; they play no part. It is harvest time with the bees—they go and come, load and unload, as rapidly as possible, and deposit their loads directly into the cells, free from any secretion whatever, to be acted upon as heretofore described; it is then pure, ripe honey.

In very early spring, the old bees act as nurses, but as the season advances, these take to the field work, and the nursing is assigned to the younger bees, which, no doubt, keep their saliva organs in constant action, as they have continuous use for them.

Mendon, Mich., Feb. 22, 1890.

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SWARMING.

Management of an Apiary During Swarming Time.

Written for the American Bee Journal
BY FRANK COVERDALE.

It has been stated in the BEE JOURNAL that more honey can be produced by allowing the colonies to swarm once apiece, than to allow no increase at all; and the latter I think will work best in all localities, simply because it takes a strong colony at all times to gather a good crop of honey.

In order to accomplish this, we must have hives with loose bottom-boards, and when a swarm issues, hive it as usual, move the old or parent hive, and place the newly-hived swarm in its place. Put over them a perforated wood-zinc honey-board; then take the unfinished sections from the old hive, and place them on the newly-hived swarm, and put the old brood-chamber on top of all. The swarm below, where the queen is, should be furnished with full sheets of foundation, as I think that bees treated in this way will be more apt to build drone-comb. The reason for this, I think, is because such large numbers of bees get to work in the brood-chamber for awhile at first, that they build comb faster than the queen can keep it supplied with eggs, and then of course the building of drone-comb begins.

Keep an empty section-case close, or next to, the new brood-chamber. In seven or eight days cut all queen-cells from the old brood-chamber on top.

In working with this system, it is best to have the sections protected next to the old brood-chamber, and for this purpose oil-cloth will answer very well. Double over one corner a little, so as to leave open enough room for the bees to pass through.

It will be seen that we have a great number of bees in one hive, with rapid re-inforcements, and no more likely to swarm again than would the new colony hived by itself—this I know from personal experience. These old brood-chambers on top, after the young bees are all hatched, should be carried away, and the honey extracted, or put away for other purposes for wintering, in case the fall crop should be a failure, and if this is found unneccessary, then extract and prepare the honey for market.

Keep your eyes on the old combs occasionally; moth-larvæ will very likely be in them, along with pollen; in this case, sulphur them, which will destroy the moth-larvæ.

After this, if any swarms should issue, treat them as before, only use full frames of comb, of which you will by this time have plenty on hand, and for next year's use, besides an apiary in good running order to produce large crops of honey, if the season is at all good.

This allows only the production of some extracted and comb honey in the same yard; but the extracted honey proves to be fully as profitable, if not more so, than comb honey.

USING THICK TOP-BARS.

I used about 200 brood-frames with thick top-bars the past season, 7/8 of an inch wide and 5/8 of an inch deep, with a V-shape below of the above depth. I used 8 frames to the foot. They aid very much in preventing brace or burr combs. The space should be a little less than 3/8 of an inch above them, with top-bars at least one inch wide, and if anything, a little wider.

Welton, Iowa.

SWARM-HIVER.

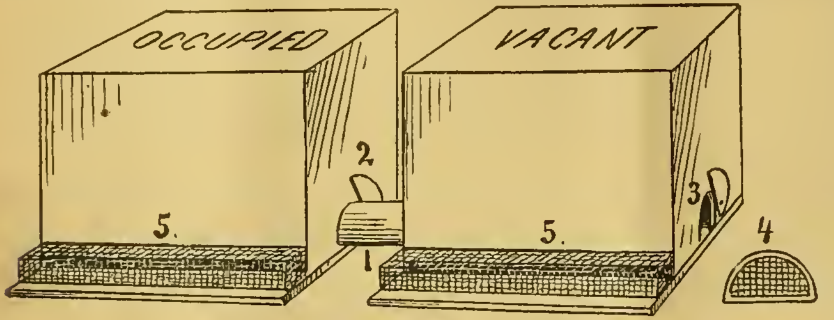
Automatic Self-Hiving Arrangement for Swarms.

Written for the American Bee Journal

BY FRANCIS D. LACY.

I notice on page 27 a representation of Mr. Alley's automatic swarmer; and as I have also applied for a patent upon my automatic swarmer, I want to show my plan in the AMERICAN BEE JOURNAL.

My swarm-hiver was tested last season, when not so well formulated as the description here given, and I believe it will never fail to work successfully. I believe that Mr. Alley's will work successfully, but there are several reasons why I like my plan the best.



The Lacy Automatic Swarm-Hiver.

1.—Semi-circular tube of galvanized iron, *not perforated*, with flat side downward.

2.—Button, made to open and close at will, so as to insert the tube, and close when the tube is taken out. The flat side of the tube is level with the inside of the bottom-board, so that the bees can walk from the occupied to the vacant hive, on the level.

3.—Opening opposite, in vacant hive, from the tube attachment. All hives are to have corresponding openings upon each side, for tube attachments.

4.—Queen-excluder to apply to the opening 3, to give light through the vacant hive, and through the tube to the occupied hive, which light attracts the bees to the empty hive, when ready to swarm.

5.—5, Queen-excluders—at about the same time, are to be placed at the entrances of the hives, to prevent the escape of the queen.

The tube attachment is subject to modification for shape, as convenience requires.

In the use of this swarmer, the hives will go by pairs when put out in the spring, and generally the bees will work into the vacant hive, without any indication of swarming; so it will seldom be necessary to apply the queen-excluder to the front entrances. The lower plane of the tube gives freedom for the bees to walk on the level of the bottom of the hive, from one hive to the other, and both hives become common to the bees.

The queen-excluder in front of the hive is quite in the way of the working bees, and for this reason should not be used, if it can be avoided; and with my plan it will seldom need to be used.

The openings upon the sides of the hives, with the button, as I have represented, will often be very convenient for ventilation when hives are in the cellar, or on hot, sultry days when in the apiary. I am having all of my hives made upon this plan, and will have all those occupied with bees, fitted for this attachment, in early spring.

SEASON OF 1889.

Report for Last Year—Honey Almanacs, etc.

Written for the American Bee Journal

BY H. J. ROGERS.

My report for 1889 is about as follows: I commenced with 75 colonies, which had wintered perfectly in double-walled chaff hives, on the summer stands. The season proved to be altogether too wet and cold for the best results; however, the flow was continuous after July 1, and until September I had no trouble in keeping the bees well up in the supers.

Swarming was late—most of my swarms issued after July 1. I had about 40 colonies that cast one swarm apiece, but I only increased them 8, as I wanted honey more than increase. By keeping each hive very full of bees, I succeeded in getting a fair crop of honey, all in the comb; 4,000 pounds of white honey, and 1,200 pounds of buckwheat constitutes my crop of marketable honey for 1889. Most of my honey was sold in New York city, at a fair price.

HONEY ALMANACS AN ADVERTISER.

I am much impressed with the Honey Almanac medium of advertising; and will have to have a thousand or more this year. My honey was all disposed of last year before Nov. 1. I have never extracted any honey for our home markets, but I shall do so this season, and trust to advertising through the "Almanac" to do the selling.

The AMERICAN BEE JOURNAL is doing a great deal in this part of the country towards improving the science of bee-culture. A number of bee-keepers are now its regular readers.

My bees are wintering finely on the summer stands. I can see no reason for not having a good season this year; basswood yielded nothing last season, on account of frost in May, so we have a reasonable expectation of getting some nectar from that source this year. I believe in trusting Providence in bee-keeping, as in everything else. I also think it pays to do everything in the *very best* manner possible, in the work of apiculture. It is the little things, properly attended to, or neglected, which make our pursuit successful, or otherwise, from a financial point of view.

LA GRIPPE AND THE WEATHER.

I notice that our fraternity are not exempt from La Grippe, although Dr. A. B. Mason (see page 115) seems to carry the idea that honey is a sure preventive. I have had a tussle with the "Enemy," and he has not abandoned the field yet, although I eat honey nearly every day in the year; however, I am very sure that honey is excellent for a cold.

The weather here continues mild—at no time has there been more than one inch of snow on the ground. The mercury lingers along in the forties—sometimes it gets as high as 60°, but not often. I do not think that brood-rearing has progressed very much as yet, and I think that every indication points to a successful season in store for us as bee-keepers.

Stannard's Corners, N. Y., Feb. 24.

NEW YORK.

Report of the State Bee-Keepers' Convention.

SECOND DAY.

The morning session began at 9:30 a.m., on Feb. 5, 1890, when President Elwood announced the appointment of these committees:

Question-box—G. M. Doolittle, W. L. Coggshall, F. H. Cyrenius.

Resolutions—C. G. Dickinson, G. H. Ashby, W. E. Clark.

Exhibits—F. H. Cyrenius, E. D. Keenan, Thomas Pierce.

Exchange—I. L. Scofield, W. L. Coggshall, O. L. Hershiser.

Out-Apiaries for Comb Honey.

The first essay of the day was by A. E. Manum, of Bristol, Vt., and was entitled: "How to run out apiaries for comb honey in connection with the home apiary." Among other things the essay stated the following facts:

"My out-apiaries are located from 5 to 15 miles from my home apiary, at the base of a mountain on the west side. They are of easy access. During the months of April and May, with one experienced assistant, I visit each apiary once a week. An assistant remains at each apiary during the swarming and honey season. I aim to have from 100 to 150 colonies in each apiary.

"My supplies for the out-apiaries are prepared at the home apiary in winter, and are distributed in early spring. After much experimenting, I find it advisable to permit the bees to swarm once, hiving a portion of two, and sometimes three, swarms in one hive, and returning a portion of each swarm to the hives from which they came, thus keeping each colony in working condition. This plan, of course, gives me 25 to 50 per cent. of increase, but I get more honey. Out-apiaries cannot be run as economically as the home apiary."

"Betsinger's long-tried system of non-swarming," was explained by N. N. Betsinger, of Marcellus, N. Y., who told of the best system to prevent swarming, and the good results which followed. Swarming is under control of the leaders, and induced by them. The longer bees are out on a limb, after leaving the hive, the less intense will the swarming-fever become.

AFTERNOON SESSION.

At the afternoon session, which begun at 1:30 o'clock, the following officers were elected: President, P. H. Elwood, of Starkville ; Vice-President, I. L. Scofield, of Chenango Bridge ; Secretary, George H. Knickerbocker, of Pine Plains; and Treasurer, N. N. Betsinger, of Marcellus.

The next meeting will be held in Albany, N. Y.

The leading essay of the afternoon session was by Ernest R. Root, of Medina, O., upon "The fraternity—the honey-producer, queen-rearers, supply dealers and editors—their obligations one to another."

Mr. Root was not present, and his essay was read by Secretary Knickerbocker. The principal points of the essay are as follows:

The editor and supply dealer very largely control progress in apicultural matters—particularly the former. Bee-papers are designed for the mutual exchange of ideas. But, obviously, there are some ideas and inventions that it were better if they had never been put before the bee-keepers. The editor should carefully discriminate between the useless and the useful. To be able to do this, he should be a bee-keeper himself, and alive to the demands of the times. He holds in his hand the throttle-valve of progress. His readers will be pretty apt to fall into his line of thinking, and if that line is progression, they will be progressive; if he is conservative, and clings to the "good old things" of the fathers, his readers will be such.

The editor of one of the leading bee-keeping papers of France, even up to the time of his death, which occurred recently, used his influence to discourage the introduction of movable-frame hives among his patrons. The result is, that a very large portion of the bee-keepers of that country are behind the times. The editor of one of the other bee-keeping periodicals of that country advocated, just as vehemently, the use of the movable frame, and he advocated it, too, as zealously as his opponent had discouraged the use of it. The subscribers to the paper that advocated the movable-frame, are progressive bee-keepers, and are using what is called the "Dadant hive and system," and, altogether, are a progressive lot of bee-keepers. While the more advanced and intelligent class of bee-keepers will not be swayed by a non-progressive bee-paper, the mass of its readers will follow closely in its wake.

There is not a country that is more progressive in bee-culture than the United States ; and this progress is largely due to its progressive bee-papers. I find that a large number of bee-keepers have a "baby" in the shape of a hive, frame, or some appurtenance connected with bee-culture. Some of these implements are practical, and are giving large results in the production of comb and extracted honey ; and, again, others are as cumbersome as they are expensive and impracticable. To place a doubtful invention before the bee-keeping public, and herald it as a "big thing," or even let it stand on its own merits, would do harm to the fraternity. Old bee-keepers would not be misled, but a large number of amateur bee-keepers would very likely want to invest their first few dollars in something of the sort. It is the business of the editor to keep down useless inventions ; false theories, false conclusions in regard to the workings of our little bee, should be relegated to the waste-basket. The editor should consider the needs of the times.

The obligation which a supply dealer bears to the fraternity, is very similar to that of the editor. He should refuse to make useless contrivances, and sell only that which may be of use to his customers. For a similar reason, the queen-breeder should put only good queens upon the market ; and the honey-producer should aim to produce the very best honey, and should have the same carefully graded. It is the duty of the fraternity to keep posted, to keep out of the ruts of old-fogyism, and believe all to be honest, until they have shown themselves to be dishonest. ERNEST R. ROOT.

The above essay was followed by a discussion of the topic, "Is it advisable to introduce laying queens to a parent colony after having cast a a swarm, or having been divided artificially ?"

Mr. Cyrenius thought that under certain circumstances it would be advisable to introduce the queen. It depended considerably upon what the bee-keeper had in view.

Mr. Doolittle said that the result of his experience was, that it did not pay. It brought about swarming, and in the midst of a honey harvest this was a condition not to be desired.

The convention then considered the comparative merits of tin and wooden separators. Upon this subject, the difference of opinion was as marked as upon the question of the Italian bee and German black bee.

During the afternoon session, President Elwood read an essay upon "The honey markets."

EVENING SESSION.

The evening session was taken up with a discussion of the best methods of marketing honey, and of the cause and effect of the short crop of honey and low prices last year. In the course of the discussion, Mr. Doolittle arraigned the liquor traffic as one of the causes of low prices. He said that the price of honey seemed to decrease as the consumption of liquor increased, and his conclusion from this state of affairs was, that a great many men preferred to buy whisky for family use rather than honey.

The best kind of a paper box for shipping honey was also talked over, and there was, as usual, a great variety of opinions.

The convention adjourned until nine o'clock the next morning, when among the others, the subject of "Shallow *vs.* large frames in the production of comb honey," was discussed in an interesting essay by J. H. Martin, of Hartford, N. Y.

At the last afternoon session, several important subjects were discussed, after which the convention adjourned.

☞ We always extend the term of renewal subscriptions from the date of expiration on our books. Present subscribers whose time may expire one, two, three or six months hence, can safely renew now, without fear of loss thereby.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Mar. 20.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Maples and White Clover.

My bees wintered well. On Feb. 3, the maple trees were alive with bees—something I never saw before in this vicinity. The prospect for white clover is the best I ever saw in this vicinity.

ALLEN LEWTON.
Quincy, Ills., Feb. 22, 1890.

Ants Very Troublesome.

I wish that those who make glass table-ware. would make and send out a lot of preserve or honey stands, with a little cup around the stem that will hold a few spoonfuls of coal-oil, so that it will keep out the ants. They are so many and so troublesome that it is almost out of the question to keep them out of anything that is sweet. I run a kind of huckster wagon; raise vegetables, and sell them and my honey all over the town and country. When I drive up to a house, and try to sell honey, the answer is, "Well, Uncle Jack, we want the honey, but the ants are so bad that I will get but one mess out of it before it will be rank with the ants. They get in my preserves and everything that they can." I have inquired a dozen times for the glass article referred to above, but I cannot find them. If the people all had it, it would be a great help to the sale of honey in the South.

JOHN H. CHRISTIE.
Dyersburg, Tenn.

Onion Honey—Visiting Apiaries.

As I was in the beautiful city of Detroit on Feb. 15, I visited the large apiary of Eber W. Cottrell, which consists of about 100 colonies of Italian and hybrid bees, with all the appurtenances necessary to the production of comb honey. The hives are arranged in regular rows, on a smoothly-kept grassy lawn; the apiary is situated on the Grand River Road, about four miles from the City Hall, and is quite near the celebrated onion-seed farm of D. M. Ferry, consisting of 120 acres. Having heard that honey from onions was unpalatable, and consequently unsalable, I asked Mr. Cottrell what his experience had been through his ten years of bee-keeping in that locality. His reply was, that although while the bees were working on the onions, it was easy to detect the disagreeable aroma escaping from the hives, but that he would defy an expert to detect any taste of onions about the honey after it was properly ripened; and that he had sold in the city markets, and to regular customers, for years without any complaint. He thinks that this is an erroneous impression, or a sensational article emanating from the tired brain of a city reporter, at a loss to supply an article for his paper.

On Feb. 16 I visited the apiary of Otto Kleinow, who has some 60 colonies, mostly pure Italians, in a variety of chaff hives, which are his favorite. Mr. Kleinow's location is a beautiful and an historical one, he being opposite Fort Wayne. The inmates of Mr. K's hives I saw "drilling" on the green; but I think that the forces of Mr. Kleinow's fort were more numerous than that of Uncle Sam's; and I think that in case of an invasion, the Commander should call on Mr. Kleinow for re-enforcements.

Lakeview, Mich. S. J. YOUNGMAN.

Cage for Mailing Bees.

I send a cage for mailing samples of bees. It is not exactly my invention, as I got the idea from the Peet cage. It is so light that the postage is only one cent, and it can be made very cheaply (less than one cent each, I think). I intend to send out hundreds of samples in these cages, next season.

S. F. TREGO.
Swedona, Ills.

[The cage is *light*, and that is its only recommendation. It is weak, and should never be trusted in the mails with bees in it—for the law calls for a double screen of wire-cloth, so that the bees *could* not sting through it. It is not up to the requirements of the Postal Regulations.—ED.]

Bees Having Frequent Flights.

Bees are doing well so far. I have lost only one colony out of 75. They have a good flight about once or twice a week, and have consumed a great deal of honey so far this winter. I hope to give them my undivided attention the coming season, and need the BEE JOURNAL to help me along.

P. P. COLLIER.
Rush Hill, Mo., Feb. 25, 1890.

Foul Brood and Its Effect.

My report for 1889 is—no honey, and no bees to winter, all having died of foul brood early in the fall. I will burn everything connected with them, and start again with a nucleus. There are no bees within thirty miles of me—where did the foul brood come from? Times are "tight" here. We can sell no butter, eggs, poultry, a cow or a horse for money.

ANDREW CRAIG.
Empire, S. Dakota, Feb. 22, 1890.

[From the woods, perhaps, where some bees may have been diseased.—ED.]

Joining the Bee-Keepers' Union.

I want to become a member of the National Bee-Keepers' Union. I have been in the bee-business for 16 years, and as Mr. Heddon says, I want to become a member while there is no cloud of trouble gathering over me; so my chances are to battle for my fellow bee-keepers, as well as for myself. Joining the Union is something that some other bee-keepers should not meditate over, but should become members at once. If it had proved to be of no use to the bee-keeper, then we might say farewell to the Union, but it has proved to be a power in behalf of the apiarists. I think that I am like a great many other bee-keepers—procrastination has us by the throat, and we cannot free ourselves. While others are battling for our pursuit, I want to be one to see that our "bee-boat" can surmount the billows in any clime. I think that it is a safe "boat" to ride in, and the ticket is so cheap—only $1.00—it seems to me that all bee-keepers ought to be on board to see that we all sail high and dry.

B. F. FEAZEL.
Washburn, Ills., Feb. 20, 1890.

Keeping Bees for Fun, etc.

I keep bees just for the fun of it, and to supply my family with honey to eat. I commenced the season of 1889 with 8 colonies, increased them to 14 strong colonies, and produced 1,600 pounds of extracted honey, and 400 pounds of comb honey. I have Italian bees, and winter them in the cellar. Golden-rod grows profusely in this locality, but produces no honey.

Knox City, Mo. S. SCHOFIELD.

Results of the Past Season.

I live in a good bee-country—there is lots of maple, basswood and white clover. The bees did well last year, but there was too much swarming. I had one colony that stored 100 pounds of honey besides casting 4 swarms—something I never heard of before. My bees were in the cellar until Feb. 16, when I had them taken out, because it was too warm; they had a good flight. I have 30 colonies, all in good condition. Will they stand the cold weather now outside until spring? I sold my comb honey at 10 and 12½ cents per pound.

FLORIAN RUEDY.
Buffalo, Wis., Feb. 20, 1890.

[We have had some cold weather here since Feb. 16, and perhaps you have already put the bees back in the cellar. If not, they may get along very well if it does not get cold enough to destroy the brood that some are rearing, perhaps. "Spring dwindling" is the only thing to be feared now.—ED.]

La Grippe and Its Victims.

I have just read what Dr. A. B. Mason has to say on page 115, about honey for *La Grippe*. Now it strikes me that honey may prevent *La Grippe*, and may be good to use after taking the "plague." Our three children have not shown any signs of the trouble, while my wife and I have both had a bad case of it. We have honey on our table at every meal, and the children eat lots of it, while my wife and I seldom taste it. I received the worst shaking up by *La Grippe* that I have had for a long time. It is now four weeks since it "gripped" me, and I am not well yet. I am able to be at the factory, and attend to a little office work, but I seem to gain very slowly. Although we are very busy, we had to shut down the factory (of Smith & Smith) for two weeks, on account of so many of us having *La Grippe*. Our foreman (my brother) had to lay off for five weeks.

J. H. SMITH.
Kenton, O., Feb. 20, 1890.

[It is not a friendly *grip*, and none of us can appreciate it. We are glad that you are improving.—ED.]

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited.
J. N. HUNTER, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Clubs of 5 for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

HONEY AND BEESWAX MARKET.

CHICAGO, Feb. 22.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 12@13c.; 2-lbs., 11@12c. Basswood 1-lbs., 11@12c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

NEW YORK, Feb. 26.—Market quiet, especially on comb honey. Prices irregular, ranging from 9@13c., according to quality. Extracted is moving fairly well at prices we give on page 60.
HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

KANSAS CITY, Feb. 26.—Demand is light. Fancy 1-lbs., 13c.; good white, 12c.; dark, 8@10c. Two-lbs., white, 10@11c.; dark, 8c. Extracted, white, 6@7c.; dark, 5c. Beeswax, 22c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 13.—Honey is selling with more freedom than for some time, but prices remain at 12@13c for the best; 10@11c for what is not prime, and 8@10c for dark and buckwheat honey. Extracted is not so active, with prices at 7@8c for finest grades, and 6c for dark and off-color. Beeswax, 25c for yellow.
R. A. BURNETT, 161 S. Water St.

BOSTON, Feb. 24.—Best 1 lbs., white, 15@16c; best 2-lbs., 14@15c. Extracted, 8@9c. Sales are slow.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Feb. 14.—Good demand for extracted honey, in glass jars, while demand from manufacturers is slow; it brings 5@8c per lb. Comb honey, 12@15c a lb. for best white.

Beeswax is in good demand at 20@24c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

Advertisements.

H. G. FRAME, North Manchester, Ind., breeder of **Italian and Carniolan Queens.** Bees by the pound and Nucleus. Price-List FREE. Reference—First National Bank. 10Etf

WHO WANTS to trade BEES (colonies of) for a young (5 years next spring) sound, gentle HORSE (Gelding) double and single to drive, about 1,000 lbs. weight. Please answer at once. E. ARNOLDT, P.B. 176, Janesville, Minn.
10A1t

THE SWARM HIVER

By Mail, and the AMERICAN APICULTURIST one year for $1.50. Circular and Sample Copies free. Address,
American Apiculturist, Wenham, Mass.
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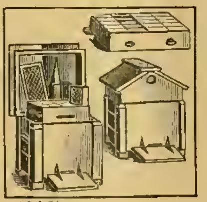

HILTON'S
Improved Chaff Hive
AND T SUPER.

The pamphlet: "How I Produce Comb Honey." Price 5 cts. Send for free Illustrated Price-List of everything needed in the apiary.
GEO. E. HILTON,
Fremont, Michigan.
10A8t

Honey Almanac for 1890.

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics, Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,
THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL

Illustrated HOME JOURNAL

A Beautiful, 36-page Monthly for the

FAMILY AND FIRESIDE.

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In order that every reader of the Bee Journal may see the beautiful Illustrations and read the entertaining articles contained in the Illustrated Home Journal, we make this SPECIAL OFFER for the next 60 days:

TRIAL Three Months FOR 10 CENTS TRIP

It is our intention to have a very extensive circulation, so as to command a large advertising patronage—and with this aim, we make the above Special Offer, hoping that those who read it for 3 months will take it regularly thereafter.

Please Read the Interesting Contents

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Look at these Premiums for Trial Clubs!

It will be very easy for any of our Trial Subscribers to show their first number to their friends, and get the small sum of 10 cents from each for a "Trial Trip" subscription, and thus get up a Club. We do not want this work done for us without remuneration, and offer as a Premium 20 per cent. of the money sent, in Books and Pamphlets, to be selected from our Book List on the second page of this Journal.

Reader, will you please give this your attention, and thus benefit yourself as well as aid us in a business way?

The Bee Journal and Home Journal (each $1.00) will be clubbed together for one year for $1.60.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. March 15, 1890. No. 11.

EDITORIAL BUZZINGS.

Though strange it may sound,
  Yet we firmly insist,
Fault often is found
  Where it doesn't exist.

◆

☞ The Rev. E. T. Abbott has been laid up with the epidemic-influenza — but we are glad to learn that he is now improving.

◆

March has been cold and stormy all over the area of North America. The early bloom has had a "set-back," and winter clothing has been in demand. This is the first real winter weather we have had so far. Of course it cannot be of long duration, and will not materially affect the bees on that account.

◆

"**The Flowers** that bloom in the spring," appeared down in Carmi, Ills., quite early this year. Two weeks ago we received a box of willow and other blossoms from our friend Ira Reeves, who lives there. The cold weather since March came in, however, has made a vast change in the early flowers.

◆

In England, the bees were reported to be swarming in February. The London *Times* of Feb. 20 contained this item:

> While a young man named Flint, son of the baliff to Mr. E. Foster, of Woodbury, Tempsford, Bedfordshire, was engaged in the fields one day last week, he suddenly heard the humming of bees, and on looking around he was astonished to see a splendid swarm of bees which had alighted on a shrub. The youth's father is an amateur bee-farmer, and being himself quite an expert, he soon obtained a hive and secured the whole swarm, which is said to be a fine one. It was subsequently presented to a laboring man residing in the neighborhood.

Spraying Fruit Trees.—Mr. R. G. Robertson, Marshall, Mo., writes as follows:

> In the spring of 1889 I had 6 colonies of bees; in the fall they had increased to 22, and had produced 600 pounds of comb honey. Every bee-keeper should take some bee-periodical. I am taking two, and I am contemplating taking another. Will the editor please give some information about spraying fruit trees with poison, giving time, etc., for spraying plum and apple trees?

The spraying should be done with weak Paris-green, and the *time* to do it is just after the blossoms fall, then it will kill the insect pest, and do no damage to either the bees or honey. Great care must be taken *not to spray the flowers when in bloom*—that is not only dangerous in poisoning the bees, but useless, for the curculio does not injure the blossoms, but the fruit.

But *why* use the poison at all? Mr. Peter Brickey gave some valuable information for all fruit-growers on this subject, on page 779 of the BEE JOURNAL for last year. He there gives a "simple, sure and easy remedy" to prevent the curlulio from damaging fruit trees, without the trouble of spraying, or the use of poison, as follows:

> Take a yarn string and saturate it well with spirits of turpentine, and tie it around the plum tree, about 2 or 3 feet high, or below the limbs, and as the curculio crawl up the tree, they are stopped by the yarn string, and turn back—they will not cross it. This has been tested to perfection, and never fails.

We advise the use of the above, instead of the poisoned spray.

◆

Mr. B. W. Peck, of Richmond Centre, Ohio, on March 6, 1890, informed us of the sad death of his wife, in the following touching letter:

> DEAR EDITOR:—I have sad news to report. On Oct. 4, 1888, I was happily married to Miss Edna Britton, of this place. I bought a piece of land about one mile from my father's place (my bees being at my father's), and built a nice home for us, during the summer of 1889. We moved into it on Nov. 11, 1889, and brought my bees here on Feb. 20, 1890. But on March 1, my new, bright and happy home was changed to a cold and dreary one, by the death of my dear wife, in her nineteenth year. No one knows my grief. I have been a bee-keeper ever since I was 15 years old—I am now 25; and have taken the AMERICAN BEE JOURNAL for seven or eight years. B. W. PECK.

We extend to our bereaved brother our heartfelt sympathy in his great affliction, and bespeak for him general condolence among our readers. We know

'Tis sad to part with loved ones
  For ever, here below;
But tearful grief oft blesses,
  When we God's purpose know.

◆

Mr. R. G. Hogue, of Loydsville, O., gave an address on "bee-ology" at the Farmers' Club held at Morristown, O., on Feb. 20, 1890. A nice programme was printed for the entertainment, and a copy of it is on our desk.

Mr. C. Theilmann, of Theilmanton, Minn., we regret very much to learn, had a narrow escape from death by accident on Feb. 18. We are glad to hear that he is improving, and hope that he may soon be all right again. He gives the following account of his "close call:"

> I have met with another and more severe accident than the one I had last fall, when my right collar-bone and two ribs were broken, caused by my horses running away and upsetting the buggy. This time, I was passing a railroad train on a narrow, downhill passage, and when the engineer saw that my horses were frightened, he opened the cylinder valves just for fun, when he came opposite my team. This scared the horses so badly, that they became unmanageable, broke the tongue, and upset the buggy, throwing me with great force on the rough, frozen ground, where I lay unconscious for about half an hour.
>
> I received a number of big gashes on my head, and was badly injured in my lungs, diaphragm and liver; but the severest pains were in my right thigh, which was totally useless up to March 5th, when I moved a little on crutches. No bones seem to be broken, but the doctors say that it is badly bruised, and that I will come out all right. The wounds on my head are nearly healed up, and I am getting some better inside, so that I can sit in a chair, and pass the time in reading and writing. This was a very narrow escape. I was just fairly over the first accident and the *La Grippe*, when the last happened; but after such a blessed and successful summer as I had last year, I hardly have reason to complain of a bad winter. C. THEILMANN.

◆

Supply Dealers and Queen-Breeders should now be making their business announcements to the public for the coming season, if they desire to get a share of the trade of 1890. All such will be welcome to the advertising columns of the AMERICAN BEE JOURNAL, providing they are doing a legitimate and honorable business. Advertisements from dishonorable persons will not be admitted, knowingly.

We have received hundreds of unsolicited commendations of the BEE JOURNAL as an advertising medium, but have no room to give them here. We will just insert two, which are fair samples of all:

> Having advertised in the AMERICAN BEE JOURNAL quite extensively for years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.—L. J. Diehl, Butler, Ind.
>
> The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.—W. M. Rogers, Shelbyville, Ky.

◆

Our New Location, in the heart of the business district of the city, at No. 246 East Madison Street, brings us in close communication with the several express companies, and we are conveniently near all the freight depots.

This location has made it possible for us to be more prompt than ever in filling orders, saving the long distance for hauling. Our friends will find it very convenient to call on us when in the city.

GLEAMS OF NEWS.

The Christian Woman, published at Philadelphia, Pa., is one of the foremost monthlies of the present time, in its peculiar line of work. Being well printed and ably edited, it is a pleasure, as well as a great profit, to read its entertaining and valuable contents. In its list of contributors are found the names of women who have become famous on account of their earnest words, and unselfish labors in various fields of activity. The February number contains this generous notice:

> The AMERICAN BEE JOURNAL for 1890, sings, hums, gathers its stock of "honied" articles, and "stings" as industriously and perseveringly as in the heat of flowery summer. The twenty-fifth volume is completed, and the twenty-sixth is begun. Its character and usefulness are the guaranty for the future. It adheres closely and strictly to its specialty, and says all that can be said concerning the industry which it represents.
>
> It is proved that those who keep bees, will find that bees keep them. We have our two colonies safely stored away in a dry and warm cellar, and we hear a humming within. If this mild weather continues, with the thermometer at 60 degrees, and dandelions blossoming in the fields, we suppose they should be put out-of-doors. Still, there may be a change, and golden-rod may not start in time!
>
> We have inquired for paraffine combs and glucose honey, so as to get that $1,000 offered for a pound, but we cannot find any in Philadelphia. Perhaps if every farmer took the BEE JOURNAL, and knew of the offer, a specimen pound might be sent. Some new Edison may arise to invent the article; but the offerer may be dead before that prodigy arises. Moreover, the AMERICAN BEE JOURNAL will continue as long as bees work and flowers grow, and the wise will subscribe for it.

In the same issue, in an item referring to the ILLUSTRATED HOME JOURNAL, the *Christian Woman* utters the following very complimentary words:

> The ILLUSTRATED HOME JOURNAL is a magzine which is prettily illustrated, well conducted, and is a worthy competitor for the approval and support of the best people.

Salve for Chapped Hands.—A salve that is good for all kinds of cuts, chapped lips and hands, is made as follows:

> Take olive-oil, with just enough beeswax to thicken it, stirred in while it is heated on the stove a few moments. If liked, a few drops of rose-water may be added after the mixture is almost cold. The olive-oil should be from the druggists—not the common oil used for kitchen purposes.

☞ The Iron Mountain *Horticulturist* for March is on our desk. It is the first issue of a new periodical published at Salt Lake City, Utah, and edited by John C. Swaner, the principal bee-keeper of that region. Of course it has a "Bee Department." It is well conducted, nicely printed, and deserves success.

Asters, Golden-Rod, Clematis.—John H. Christie, Dyersburg, Tenn., says:

> I send you one section of honey by express; I would like to know what it was gathered from—I suspect that it is linden, but there is no linden nearer than three miles from my apiary, though it is the last that is gathered in the spring harvest, and but few colonies have it.
>
> I also send some leaves and flowers, and parts of a vine, that grow here (but not very plentifully), that bees work upon from light until dark; it grows about old fence-rows and thickets in the fields where it is protected from stock. It is a vine, and the topmost part generally lives all winter, but will sometimes die clear to the ground. Please name the flowers and vine.
>
> I notice on page 58, that Mr. Ira Reeves says that he does not believe that there ever was an ounce of golden-rod honey gathered. Now I could not say postively that there was, for I never open the bees to see if they have honey in them; but I can say that I have seen them upon the golden-rod by the thousands, and have smelt them in time of the golden-rod bloom, by the time I would get within forty yards of them on any warm, still night; and, besides, the honey that they gather at such times, tastes like the plant smells, and the honey is as nice as any I ever saw—the comb and honey is nearer the color of gold. The aster that we have rarely grows more than 3 or 4 feet high, while the golden-rod often grows 10 feet high.
>
> JOHN H. CHRISTIE.

We refer you to our comments on a letter from Mr. L. G. Purvis, on page 106, concerning honey from golden-rod.

The honey you sent comes from several flowers, and cannot be called linden honey, though there is some linden in it. We are not sufficiently familiar with Tennessee to name the sources.

One of the flowers sent is one of the numerous family of asters—the other is a species of clematis or Virgin's Bower, apparently *Clematis Virginiana*. It is in the fruiting stage.

Two-Fifths True.—R. H. Holmes, of Shoreham, Vt., on March 3, 1890, writes us as follows:

> DEAR EDITOR:—In your issue of Feb. 22, on page 119, in the report of the Vermont Bee-Keepers' Convention, it is stated that "Mr. Holmes completed at this meeting his fifth year as President of the Association," etc. The quotation referred to is a mistake, which possibly grew out of the fact that I had been President for two years past, and Secretary for the three years previous to that. If you will note the correction in the next issue of the BEE JOURNAL, you will confer a favor upon me, and give "honor to whom it is due," namely, H. L. Leonard, of Brandon, Vt., and P. C. Abbey, of Essex, who so ably performed the duties of President while I was Secretary.
>
> R. H. HOLMES.

The report was sent us by the Secretary, corrected from a reprint of the *Free Press*, and credited to it. We presume the reporter made the mistake, and that it was not noticed by the Secretary. We cheerfully make the correction.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50 all are sent at one time.

Golden-Rod Honey is excellent for medicine, and the following from Mr. C. J. Robinson, shows that the herb is also valuable for its medicinal qualities. He says:

> Different correspondents make different mention of golden-rod as a honey-producing plant. The discrepancy is wide, and of much importance—all important. Can the discrepancy be reconciled—correctly explained? Golden-rod is the common name—*Solidago odora* is the botanical name. It is the variety known as "sweet scented golden-rod" that secretes and furnishes honey. Probably there is some difference in the amount of nectar secreted by this variety of the genus *Solidago*, the difference being occasioned by difference of soil and climatic influences.
>
> *Solidago odora* fluid extract and oil is among the pharmaceutical preparations of drug-stores, and used by physicians. B. Keith & Co., manufacturing chemists of New York city, give the medical properties of the plant thus: "Aromatic, stimulant, carminative, and diuretic. Employment—pain in the stomach and bowels, flatulence, suppression of urine, inflammation of kidneys and bladder, and for inhalation in diseases of the respiratory organs."
>
> It will be seen from the above reliable medical authority, that the golden rod is one of our best herbs for medicinal use. A decoction of golden-rod might convince those who decry the plant, that the despised weed is worthy of no small praise. Try it.

Good Market for Honey.—Mr. Geo. G. Scott, of Wadena, Iowa, on March 3, 1890, wrote us as follows: "Enclosed please find a favorable market report on honey. It is an evidence of reduced stocks, and a good market for the coming season on comb honey." The report was from one of our honey merchants, and reads thus:

> CHICAGO, Ills., March 1, 1890.
>
> The receipts of white clover honey are very light; demand good; and we find no difficulty in closing out our receipts of white clover, as we have orders awaiting arrival of goods. We would advise prompt shipments, so as to take advantage of the present firmness in our market. One-pound sections will readily sell for 12½@14 cents, according to size and appearance of crates.

New Catalogues and Price-Lists for 1890 are received from—

W. T. Falconer Manufacturing Company, Jamestown, N. Y.—24 pages—Apiarian Supplies.

Geo. H. Kirkpatrick, Portland, Ind.—8 pages—Bee-Keepers' Supplies.

Marcus Holtz, Tiffin, O.—6 pages—Apiarian Supplies.

Chas. Dadant & Son, Hamilton, Ills.—24 pages—Comb Foundation, and Supplies for the Apiary.

W. H. Norton, Skowhegan, Maine—20 pages—Bees and Apiarian Supplies.

St. Joseph Apiary, St. Joseph, Mo.—8 pages—Bee-Keepers' Supplies.

Handling Bees.—This is the title of a nice pamphlet containing 14 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cents. For sale at this office.

QUERIES and REPLIES.

A Procedure when Colonies Swarm Naturally.

Written for the American Bee Journal

Query 692.—How would this plan work where colonies are allowed to swarm naturally? Hive the swarm as recommended by Mr. Hutchinson, namely, frames with starters in the brood-chamber, queen-excluding honey-board, and full combs in the super; take the parent colony and remove all combs except one having a queen-cell (if more cells than one, they can be cut out, leaving only one); fill the brood-chamber with frames having starters, put on the queen-excluding honey-board, and fill the super with combs—that is, the combs from the brood-chamber. In place of the queen-cell, a laying queen can be given the parent colony. Suppose the apiary to be run for extracted honey. By the above plan, I can get all my colonies to work in the supers, and have brood-combs drawn out at the same time. What is your opinion of the plan?—La.

It looks plausible.—Mrs. L. Harrison.

I think that the plan will work very well. —J. P. H. Brown.

I never tried this, but I think that it would work well—A. J. Cook.

Having had no experience with this, I cannot express an opinion.—M. Mahin.

It may work all right, but there be objections not thought of until put to the test. —C. C. Miller.

Your plan will work, yet it is not the plan that I would adopt in my locality (Michigan).—H. D. Cutting.

If I were at work for extracted honey, I would not bother in that way.—A. B. Mason.

It would probably work all right, if you like the combs built in that way.—R. L. Taylor.

I have never tried it. The space is too limited to expand an argument in support of, or against, a theory.—Eugene Secor.

I doubt the feasibility of the plan. You would get too much drone-comb. Try it, and report.—J. M. Hambaugh.

If you give the parent colony a laying queen, your plan will work; otherwise your bees will build drone-combs. If you work for extracted honey, you need have but very few swarms.—Dadant & Son.

It is too much "fussing." I do not favor extracting honey from a brood-comb, or from comb that has ever been used as brood-comb.—J. M. Shuck.

I may be thick-headed, but I do not understand the question. Colonies will produce more extracted honey when they do not swarm, and swarming is unnecessary when working for extracted honey.—G. M. Doolittle.

I have done with hiving swarms on starters only—entirely too much drone-comb is the result. There are some objections to putting starters only in the parent colony. The last plan may work all right for extracted honey.—C. H. Dibbern.

Your plan ought to succeed and give the best of satisfaction in results. I believe in getting bees to work under the swarming impulse, as far as possible, and this is one of the plans to do it. With right management, a colony that swarms will store more surplus than one that does not—provided the swarming is not too late in a honey-flow.—G. L. Tinker.

The plan is all right, and I think that it will work well enough, but it is too complicated, I think, for many. I should not like it myself. If by the plan *you* can get "all your colonies to work in supers," etc., you should stick to it.—J. E. Pond.

Whether your plan or something similar will fail or succeed, depends upon climate, season, etc. Such detail plans as the one you speak of, belong to a series of a thousand others will all sorts of variations. Everything depends upon the bees, operator, location, season, and all that.—James Heddon.

Your plan will work, but the combs will be mostly drone size, unless you have a young laying queen, able to keep the newly-built combs filled with eggs as fast as built. Try this plan and report: When a colony casts a swarm, have a super or hive-body prepared with five frames filled with foundation (or with starters), the rest of the space filled out with division-boards. Put on a queen-excluder, and place the parent brood-chamber on it, with its surplus cases as they were before the swarm issued. Hive the swarm below, and when the brood is all hatched out, extract the honey from the upper combs, and fill out the brood-nest below, and use the rest where needed.—G. W. Demaree.

◆

The Double-Walled vs. Single-Walled Hives.

Written for the American Bee Journal

Query 693.—1. Do you use double-walled or single-walled, hives—that is, walls without packing? 2. When no packing is used, how much dead-air space would you give, and what thickness of lumber would you use for each wall? 3. Would you make the bottom-board double-walled, the same as the sides and ends of the hive? 4. When kept on the summer stands the year through, has the double-walled hive any points of superiority over the single-walled hive? If so, what are they? 5. What points of superiority has the single-walled hive over the double-walled hive? 6. Are the points of superiority of the double-walled hive sufficient to pay for the extra expense of construction over the single-walled hive?—Ohio.

1. No. 5. Cheapness and convenience.—R. L. Taylor.

Only single-walled hives are used in this latitude (Georgia).—J. P. H. Brown.

1. Single-walled hives. I have no experience with double-walled hives.—J. M. Hambaugh.

1. Single-walled hives. 2, 3 and 4. I never had a double-walled hive. Perhaps I ought to try one. 5. They are lighter to move.—C. C. Miller.

1. Single-walled, only. 2. I do no know. 3. No. 4. Yes. 5. It is lighter and more easily handled. 6. No.—C. H. Dibbern.

1. I use both. 2. One inch dead-air space, and ⅞-inch lumber. 3. Yes. 4. With me, the bees winter better, and do better in summer. 6. Yes.—M. Mahin.

1. Single-walled. I winter the bees in the cellar, and pack with chaff in the spring. 3. Yes. 4. Some say yes, and some no. My experience has been too limited to be of value.—A. B. Mason.

1. I use both, but prefer the single-walled hive. 2. About 3 inches; ½ or ⅞ lumber, as preferred. 3. It is better so. 4. Certainly; they protect from cold and heat. 5. Cheaper, lighter, and, if well packed, as good in the spring. 6. I think not.—A. J. Cook.

1. Mostly double-walled. 2. I use a 5-inch space filled with fine straw. 3. I do not. 4. Yes. The bees are protected from extreme heat and cold. 5. Not any, except portability. 6. I think so, or I should not use them.—G. M. Doolittle.

1. Both. We have some hives with a ⅞-inch inner wall, ⅞-inch dead-air space, and ⅜-inch outer wall, and like them well. 3. No; and yet it might pay. 4. Yes; that thin outer wall acts as a protection to the hive against cold winds and very cold weather. 5. Cheapness. Yes, we think so.—Dadant & Son.

I would not use double-walled hives. They have some great advantages, but the balance of excellence is with the single-walled, light-weight hives. My hives, complete, with two supers and hive-stand, weigh from 30 to 35 pounds each.—J. M. Shuck.

1. Both. 2. One and one-half to 2 inches; ⅞ inch outside, and ½ inch inside. 3. No. 4. I have found that it has in my locality. 5. It is far cheaper to construct. 6. Not in my locality; with proper and the same care in packing I see no difference.—J. E. Pond.

It will take at least one column to properly answer this. 1. Single-walled in the summer, ⅞ inch thick. 2. Four inches, divided ten times by thin partitions of wood or paper; ⅞ inch for the hive, ⅜ inch for the outside of the packing-box. 3. Single, of ⅞-inch board. 4. Only as protection from cold in winter and spring. 5. Not space enough to give detail answer. 6. I do not know.—H. D. Cutting.

1. Single-walled. 2. Seven-eighths-inch thick; we winter in the cellar one-half of our bees, the balance on the summer stands, with chaff cushions over the frames. 3. I would never make a double-walled hive. 4. They are warmer in winter, but the same ends can be obtained more cheaply in other ways. 5. It takes less material, is more cheaply made, and more easily moved. 6. No.—Mrs. L. Harrison.

1. My hive may be used as a double or single walled hive, but I prefer to winter bees in the double-walled hive. 2. If I did not use packing, I would want the hive made of heavy lumber; but *as* I use packing, the outside of my winter case is made of thin stuff—5-32 of an inch thick. 3. No. 4. They are better to winter bees in. 5. Very few. 6. Yes, and many times over, in my opinion.—G. L. Tinker.

I have in my possession over 50 double-walled hives, with one inch dead air space, and though costly hives, they would go cheap now, if I could dispose of them. To make the story as short as possible, such hives do not give satisfaction in my locality (Kentucky). No doubt they would serve a better purpose further north, but somehow or other, my bees build up more rapidly in single-walled hives, that are easily warmed by the sun in the early spring, as well as at intervals in the winter time.—G. W. Demaree.

A single-walled hive, every time. The bottoms and covers are ⅝-inch thick, sides ¾-inch thick, and ends ⅞-inch thick. The double-walled hive is inferior to the single-walled, if the latter be placed in another box, and packed during the spring, and in the winter if wintered out-doors. The single-walled hive is the only one fit to use upon the readily-movable hive plan—the only plan which can produce honey at present prices and compete. Double-walled hives are too great a hindrance to successful modern apiculture, to be worthy of taking even as a gift. Their day is done.—James Heddon.

◆

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cts., postpaid.

CORRESPONDENCE.

BEES IN SPRING.

How to Manage Them After Wintering.

Written for the American Bee Journal

BY ALLEN LATHAM.

On page 648 of the BEE JOURNAL for 1889, I gave my method of wintering bees, and said that I should have something further to say in regard to spring management. By the time this reaches the readers, it will be time to look after the bees.

Probably most of the bees throughout the country have wintered well; those which were put up according to the method given in my former article, I am sure, are doing well. My 37 colonies are in first-class condition. All who have packed their bees should, about the middle of March, open the hives, and make a thorough examination. If there is plenty of honey, the frames should be taken out, and the cappings shaved off of about 5 pounds of honey. In my case, as I have but four frames in the hive in winter, I spread the brood.

If there is not much honey, you should proceed as follows: Remove the frames which have no brood—say two frames; lay one in a tub, and fill it with thin syrup by pouring the syrup on the comb; when one side is full, turn the frame over. There is no danger that it will run out of the first side, wile the second side is being filled. Put about two frames of this into the middle of the brood-nest, and you will be agreeably surprised, on examining them about three weeks later. This is by far the best method of spring feeding. It not only furnished the required food, but stimulates the bees to rearing brood; moreover, no bees are lost by flying out in the cold.

About the first week in April, the bees are to be overhauled again. Cushions must be removed, and more combs added; the brood-nest should be divided, and about two combs, with the cappings sliced off, placed between. It is *not* well to leave one comb of brood by itself, or it may be deserted; if two or more are put together, there is almost no danger of that. If the hive is populous, it will bear considerable brood spreading; if not populous, care and judgment should be exercised.

At this time of opening—say April 5—it should be seen to, that the colony has plenty of honey to last until fruit-bloom. If the apiarist is near his bees, much will be accomplished through daily care; enlarging or diminishing the entrance, and on warm days taking off the top cushions to let the sun warm up the hives are useful for promoting brood-rearing. I am 35 miles from my bees, and do not see them oftener than once in three weeks. Nobody else touches them, and so I have to do the best that I can when I do get to them.

If the bees have been properly tended, and have been supplied with both honey and some substitute for pollen, if necessary, by the first of May they are overflowing their hives, and are ready to carry in the apple-blossom honey when it comes.

The foregoing directions for spring management of bees are for hives packed on the summer stands. I have never wintered my bees in any other way, and hence I do not know anything about other methods. I do know this, though, that weak or strong colonies can, by reason of careful packing, be wintered safely, and be quickly bred up into booming colonies by the first of May. The packing allows a small colony to cover a large amount of brood.

One spring I had one colony reduced to about one pint of bees; it contained my best Italian queen. The reason of their being so weak, was through faulty fall management, and not from the effects of wintering. I gave this small colony daily attention, and kept the entrance down to a size to admit one bee at a time. The colony received no help from other colonies, and no artificial heat; but by May 15, it was a roaring hive, with nine frames of brood. At one time there were four frames of sealed brood, and only one or two bees to every twenty-five cells. I suppose that the growing brood must have helped keep up the heat of the hive. Such a thing would be impossible with an unprotected hive, and scarcely practicable in the cellar.

The time to remove the packing is when apple-trees are in bloom.

Cambridge, Mass.

ASSIMILATION.

Nectar and So-Called Honey-Dew Not Digested by Bees.

Written for the American Bee Journal

BY DR. J. W. M'KINNEY.

It is wonderful, but nevertheless true, that in matters of politics, religion and science, an *absurdity* however great, will find believers and advocates. Therefore we are not so much surprised to find some believing and advocating the "digested nectar" theory of Prof. Cook. He said before the International Convention at Brantford, Ont., "that honey is, in *reality*, digested nectar;" "that it is in a condition to be assimilated without undergoing any change in the true stomach." In this he was supported by Mr. S. Corneil.

This assertion (for it is but an assertion) is made, too, in defiance of the admitted fact that the nectar as gathered by the bee, *does not enter the digestive canal at all*, but is received into a sac, or "honey-bag," situated above and behind the digestive apparatus; and, while not so remote, it is as distinct from the digestive organs as is the pollen-baskets on the bee's hind-legs.

If the nectar is digested, as Prof. Cook says, "while in transit from the field to the hive," it is done *outside* of the digestive organs, and in defiance of all physiological laws.

It will not be contended, I presume, by any one, but what all fluid substances gathered by the bee, and carried home to the hive, are subjected to like processes, and are all carried in this special receptacle for carrying fluids—the honey-bag. Then, if "nectar is digested, and ready for assimilation," all other fluid substances so carried should be ready for assimilation.

Two years ago last September, as, no doubt, many readers of the BEE JOURNAL remember, the bees in this part of the country gathered very abundantly from the leaves of forest trees, a very dark, sweetish substance, called "honey-dew," but in fact it was the excreta of the aphis. Many colonies of bees had little else to winter on. Those that could not take frequent flights during the winter soon became diseased, and most of them died; leaving the front of the hive and tops of the frames daubed with a dark, tenacious excreta. If the bees, when gathering this substance, had "digested" it before depositing it in the combs, and had it ready for "assimilation," can any one suppose for a moment that this mortality among the bees would have resulted? Instead of this stuff having been digested before or after being deposited in the combs, a great portion of it was found to be actually *indigestible*, being a ligneous, unnutritious substance, to be got rid of as excrement, and to be frequently voided as such.

Prof. Cook has well described the glands situated in the head of the honey-bee, and, in my judgment, only misconstrues the function of some of these complex glands. That these head-glands furnish largely the fluid secretions concerned in digesting the *crude* substances (honey and pollen) there is no doubt; that these secretions are poured into the digestive canal when the bee takes the crude honey and pollen into the stomach, is equally true; that the substances thus entering the stomach undergoes the process of digestion, and is converted into a white, opake substance, called "chyme," is certainly true; and when brood-rearing is going on, an abundance of this chyme is regurgitated by the nurse-bees into each cell where there is a larvæ, as food to develop their growth.

Now, right here let me ask, is there an apiarist in all this broad land, that ever saw *crude* honey, or honey and pollen taken from the cells where it had been stored, and fed to the larvæ, in the crude state? Yet we are told that "honey is 'digested nectar,' ready for assimilation!"

Let me now quote from page 831 of the AMERICAN BEE JORRNAL for 1889: "As is well known, this nectar is neutral, and contains cane-sugar." "Honey is acid, and contains reducible sugar." From this it follows that bees *do make* honey from cane-sugar! In fact, Prof. Cook has so stated elsewhere.

In relation to this matter, let me state in brief the following experiments, viz:

Bees fed on cane-sugar syrup some distance from the hive, were allowed to fill themselves, and when preparing to return to the hive, they were captured under a glass vessel, and retained for ten minutes (a much longer time than it would take them to fly a mile), and then killed; by carefully dissecting out and opening the honey-bag, dropping its contents on litmus paper, we obtained a negative result as to the presence of an acid. The same test was applied to the contents of the honey-bag of other bees immediately after filling themselves with syrup, with like negative results.

After syrup had been stored in the hive for several days, and then removed and dropped on litmus paper, the presence of an acid was plainly manifest. The same test was then applied to syrup left standing in an open vessel for the same length of time that the syrup had been stored in the hive, with the same resulting evidence of the *presence of an acid.*

From this we conclude that the negative results of the presence of an acid obtained in the first two experiments, was in consequence of the syrup not having been exposed a sufficient length of time to the action of the great acidifying element—oxygen.

The acidifying of the syrup deposited in the combs was no more due to a secretion of the bee-glands, than was the presence of the acid in the syrup left standing in the open vessel. In both instances it was due to the action of the oxygen in the atmosphere.

It is a recognized fact by chemists, that *all substances containing saccharine matter in a fluid form,* contain an acid in an *isomcrie* form, and needs but the action of the oxygen of a warm atmosphere for a few days at most, to make it manifest. This is the plain, rational explanation of how the acid is developed in honey. Thus we see that it is not necessary to look into the bee, or the bee-glands, to account for the presence of the acid found in honey.

Furthermore, if this acid is a secretion of the bees, and to the sweets gathered, and by the bees added during a supposed digesting and refining process, we would expect all such sweets to be more uniform in taste, color, consistence, and effect as an aliment, than is found to exist. Instead of uniformity in these respects, we find that if the bees gather sweets from an impure source, that impurity still exists so long as these sweets remain in the combs. We are obliged to look to the source from whence the sweet is obtained, if we expect good honey. The bees cannot make it!

Some look upon this whole thing as unimportant, and as a matter of indifference to be soon forgotten. I do not think that an error, or ignorance in anything pertaining to the production of honey, should be treated as a matter of indifference. Be assured, the more fine nectar-bearing bloom that is grown, the more and better will be the production of honey; and we should fully recognize the fact that the source of the best honey is from the nectaries of the best nectar-bearing bloom; that honey will vary in quality by reason of the source from whence it is gathered, and that it is wholly a vegetable production, and no part an animal secretion.

Camargo, Ills.

INCREASE.

How to Manage and Control Increase.

Written for the American Bee Journal

BY H. SAWYER.

I feel sure that by boring a 2-inch hole in a hive that is full of bees, and put a piece of queen-excluding metal on the inside of the hive, and then put an empty hive close beside it, with a corresponding hole also covered with queen-excluding metal, the bees will go through, and be in the empty hive, and when they do, put in a comb of brood and one or more empty combs, or frames filled with foundation, next to it; and in a day or two after, put in a queen-cell, well started or capped, or nearly ready to hatch. In a few days there will be another swarm of bees, and where a person is anxious for increase, by using small hives, say of about 3 frames, there can be a great number of colonies made from one in a short time.

It probably would be well to transfer them into full-sized hives, in September, to grow up into full-sized colonies for the next season's regular work; and by putting small supers on top of these small hives, perhaps they would store a considerable surplus of honey besides.

In hives with telescope caps, bore the holes just the same, and put a block with a corresponding hole in; to fill the space between the two hives with queen-excluding metal on both sides of the block, would be just the thing. Bore the holes all of one size, and have barrel bungs turned to stop the holes, when the hives are separated.

It appears to me that here is a plan to solve a great deal of trouble, in watching bees at the swarming season; and, it appears to me, that very likely there may be secured by this means some of those great yields of honey that we sometimes hear of, where bees are put into a room in a house.

The question is, how to use this plan where a person has all the bees they want, and cannot sell the increase that will naturally arise. From the foregoing course of procedure, I see no way but by uniting (probably the best time would be in the spring), to reduce the number, and then each colony would start in storing, to do rapid work both in surplus honey and filling up the empty hives.

Will some practical bee-keeper give his views on this departure from the usual methods of managing increase?

Burlington, Iowa.

BEE-ITEMS.

The Weather, Honey Almanacs, Bee-Escapes, Basswood, etc.

Written for the American Bee Journal

BY O. S. COMPTON.

To-day we are having the worst snow-storm of the season, but my bees, packed in 3 to 6 inches of chaff on the summer stands, are coming through the winter in splendid condition. They have had weekly flights all winter, and brood-rearing is in progress in nearly every hive.

The past season (as well as the two previous ones) was a very poor one for honey or increase of bees, in this locality, and the average per colony, spring count, was less than 40 pounds of honey, and most of it was buckwheat and golden-rod.

THE ALMANAC A GREAT AID.

The Honey Almanacs are the "boss" to build up a home market. I ordered 100 to test the matter, and they just rolled the orders in, and almost before I knew it, the crop was sold at good figures, viz: 8 cents for buckwheat, and 10 cents a pound for the basswood honey, and purchasers furnished the receptacles. These prices are for extracted honey, as I produce that, almost exclusively.

I also sent a few hundred pounds of the buckwheat honey to Detroit, to a commission house, and it netted me 8⅝ cents per pound; but bee-keepers must remember that to get such prices, the honey must be of the very best quality, in suitable packages for the trade—and it does not pay bee-keepers to put anything else upon the market.

THE REESE BEE-ESCAPE.

I have used this bee-escape for the past two seasons, and I should think seriously of quitting the business if I should be compelled to do without it, or some similar contrivance. It is a great help in taking off comb honey, and its value in the production of extracted honey is hard to estimate.

DIVISIBLE BROOD-CHAMBER HIVES.

I have had in use since 1886, a few of the divisible brood-chamber hives, and words fail to express my delight in the use of them. They are certainly the best hives for comb honey, and my experience teaches me that they cannot be excelled for the production of extracted honey. I shall use the new hive exclusively in the near future. I have never before praised up the advantages of this hive, because I wanted to be sure, by several years' experience, that my convictions were not misleading me.

DESTROYING BASSWOOD TREES.

I, too, protest against the wholesale destruction of our basswood, and I would advise bee-keepers who produce comb honey, to use the white poplar 4-piece section, as being the best, whitest and neatest section upon the market. This winter nearly 500,000 feet of basswood logs have been sold to our sawmill men, and all taken from my field, so I shall have cause for alarm. I am doing what I can to counteract the loss, by planting three and four year old basswood trees, along our streets and waste-places.

BEE-EXHIBIT AT THE WORLD'S FAIR.

Now that we are going to have the World's Fair at Chicago, in 1892, I want every progressive bee-keeper in the land to make an effort to help the show along, and we want to make the grandest display of honey, bees, hives and fixtures that the world ever saw. We can do it, and with Dr. Mason to lead us, there should be nothing left unturned that would add to the grand display. Let us hear from Dr. Mason—what course he intends to pursue, and then let us all take a lift at the wheel, and start it rolling.

Glenwood, Mich., March 4, 1890.

WIDE FRAMES

Defended for their Advantages Over T Supers, etc.

Written for the American Bee Journal

J. V. CALDWELL.

For the last year or more I have been greatly interested in the discussions *pro* and *con* as to the merits of the T super, as compared with the old, reliable wide frames; and, indeed, it seems that unless some one becomes a champion for our good wide-frame super, too many of our good bee-brethren will needlessly destroy the frames that have done such good service, and adopt some new-fangled super, which will, in the end, give them no more honey, and will surely—it seems to me—give more trouble in manipulation than our old friend—the wide frame.

Let us note briefly the claims of the T super:

First, one special feature is that any width of the 4¼x4¼ sections can be used; and, second, that all the sections can be removed at once. I will not give any more, but will only say that using all widths of sections is of no advantage, in my opinion. I want just one size of sections, and one size of hives in my apiary.

The next claim, that the sections can all be taken out at once, is an objection to its use, as there often are times when we want only to remove part of the sections—especially when only filled in the centre of the surplus case—and then we must handle sections singly; whereas, with the wide frame, either four or eight pounds can be taken out, and an empty frame inserted.

Again, the T supers contain too many loose pieces, as by the simplest way they are made, the separators are put in loosely; while the wide frame is compact, and has no loose pieces whatever. The wide frame also protects the sections on all sides from the bees, and to accomplish the same result with the supers, a lot of pieces must be laid on the top and the bottom of the sections.

Now has the wide frame any faults? It has but one that I know of, and that is but a slight one, viz: the sections do not come out so easily; but I think that Dr. Miller, who has used both systems, does not count this an objection.

If any of the fraternity think differently, just let us hear from them.

THE DIBBERN BEE-ESCAPE.

Having just made a close examination of Mr. Dibbern's improved bee-escape, I must say that I am greatly pleased with it, and I think that it is one of the most useful inventions ever given to the bee-keeping world. I have not as yet given it a trial, but Mr. D. tested it thoroughly the past season.

I am personally acquainted with Mr. Dibbern, and know him to be a skillful bee-keeper, producing from five to ten pounds of comb honey each season. He is also a man of the strictest integrity in every respect.

Cambridge, Ills.

BEES IN WINTER.

The Temperature of Winter Repositories for Bees.

Written for the American Rural Home

BY L. F. ABBOTT.

When Mr. Langstroth prepared his celebrated work on the honey-bee, and which still remains a standard authority of its class, he wrote concerning wintering: "What way precisely is the best, can only be determined by careful and long continued experiments, and yet, these ought not to be conducted so as to hazard too much in one venture."

At present we think there is not so much diversity of opinion in regard to wintering bees, among practical bee-keepers, as when Langstroth wrote his book. What seems to be most necessary in the conditions for successful wintering, is protection from atmospheric changes. This may be attained by chaff hives, or by wintering in the cellar, or other underground apartment. These conditions also include colonies that are healthy, strong in numbers, with an abundant store of honey; upward ventilation to the hives, easy communication from comb to comb, and if out-of-doors, the hive entrances sheltered from piercing winds and the direct rays of the sun.

For myself, I have had less loss, on the whole, from cellar-wintering than wintering bees out-of-doors. This must include colonies of all sizes and conditions. Wintered in a temperature so far above freezing as to afford the best conditions—38° to 40°—there is less loss of bees in individual numbers; less consumption of stores, and in some instances it has been found that brood-rearing has been carried on in the cellar where colonies possessed young and vigorous queens so that such colonies come out as strong in numbers, if not actually stronger than when put into the cellar in the early winter.

This state of things cannot always be depended upon, however, but experience seems to have demonstrated that we may reasonably hope to get small and rather weak colonies, that have an ample supply of good quality of stores in their hives, through to April in the cellar, when, if wintered out-of-doors, they would be quite sure to die.

But given strong, healthy colonies with plenty of stores, taking into account the vicissitudes of getting through the unfavorable weather of April, and often the first ten days of May, which tell so unfavorably upon the cellar-wintered colonies, that it is a question in my mind whether the risk is greater to winter bees out-of-doors than in a good cellar.

The experience of the past eight years has fully satisfied me that a cold cellar, one in which the mercury drops to freezing and below, unless kept up by artificial means, is about the worst place in which to winter bees that could well be selected.

Another thing is pretty well settled, and that is, that in our Maine climate, where the mercury frequently drops from 15° to 25° below zero, and continues for days together at zero and below, that some more protection to our hives is needed to winter bees successfully out-of-doors, than the ordinary single-walled hive affords. Perhaps it may not make so much difference whether the hives are so constructed as to afford a dead-air space, two thicknesses of walls, chaff or leaf-lined, or encased with some improvised outer covering; the main thing to be attained is some protection from the intense cold and the sudden changes of the atmosphere.

In my experience I have settled down to this practice: Strong colonies are placed in chaff hives, or single-walled hives, given protection by packing in leaves with an outer board covering, and left on their summer stands. Weaker colonies—those which may be regarded as any ways doubtful—are placed in the house-cellar and kept there as far into April as they can be kept quiet.

FAVORABLE WINTER FOR BEES.

The present winter so far (Jan. 15) may be considered a favorable one for bees in this section of the country. The frequent mild days in November and December gave the bees, where the hives were on the summer stands, ample occasion to fly at intervals of two or three weeks till the middle of December.

On the 16th of November, bees were observed entering the hive with pellets of pollen upon the legs, the like of which I never saw before in an experience in caring for bees of over forty years. It is somewhat singular that flowers should be found that yield pollen so late in the season, but it was evident from the appearance of the substance that it was gathered from charlock, which has of late years found its way to Maine fields from the West, in oats and grass seed. This plant blossoms until snow flies.

Lewiston, Maine.

Yesterday is Past.

Yesterday is dead
  And lies at rest.
No breathing stirs
  The white-robed breast;
The groans and sobbing
  Are hushed at last.
Thanks be to heaven!
  Such pains are past.

Seek not to rouse
  Its unquiet ghost;
Conjure to phantom
  Of what is lost;
Come away softly
  And make no moan,
Leaving thy perished hope
  Dead and alone.—*Scribner's*.

BEE-LEARNING.

Fastening the Bottom-Boards—Keeping Tally of Colonies.

Written for the American Bee Journal
BY HENRY STEWART.

It is to the investigations and teachings of others that we are all indebted for the most of what little we know; the wisest and most learned in the apiarian sphere have only become such by gathering up the littles which have been first studied out by the myriads, and refuting, improving and weaving these into a net-work which the possessor chooses to boast of as the knowledge of his experience, but which in reality is in the main but a rehash of the experience of others. Each of us should be only too glad to contribute our mites to the great store-house of knowledge when opportunity presents itself.

In my last year's experience with bees, I have learned much from the pens of others, as well as a few things from my own investigations, and a couple of these I will describe.

FASTENING MOVABLE BOTTOM-BOARDS.

About a year ago I purchased a few colonies of bees in hives with loose bottom-boards, which I desired to move five miles by wagon, and how to fasten those pesky bottom-boards without driving the hives full of nails, was the question which I soon solved, by the use of the common butter-tub staple, which I found to be just the thing in the right place. Not only did I find that staples were useful in this instance, but I fastened on all the bottom-boards of my new hives with them, using one at each corner, thus making a bottom-board which is perfectly solid, and holds the hive true and firm, yet one that can be easily and quickly removed by the use of a chisel in prying out the staples.

TALLY FOR SURPLUS-HONEY CHAMBER.

The other discovery is a "tally" for indicating the condition of the surplus chambers during the working season. This is a very simple device, but it is practical, and I prize it highly. It is absolutely necessary to become better acquainted with the condition of a large yard full of bees, than the memory of the average bee-keeper will permit of. I have tried several different ways of keeping these records, but I found them very unsatisfactory until I found this one, which is simply as follows:

I cut a small circle with a lead-pencil on the side or end of the hive. This is the tally-board, and for tallies I use, little, sharp brads, and small bits of differently-colored paper. I use the paper to indicate the date when the hive was last examined, and the position of the brad in the circle.

To note the condition of the surplus-chamber the first week in the month, I use simply a brad without paper; the second week I use a brad on which is a small bit of red paper; the third week the brad with white paper; and the fourth week, blue paper.

A brad placed on the circle indicates that the observation was taken in the middle of the week; on the outside of the circle the first, and on the inside of the circle, the last of the week.

A brad on top of the circle, indicates an empty chamber; at the bottom, half full; and half way between these, either ¼ or ¾ full. So in walking through my apiary the third week in the month, I observe a hive with a red paper at the ¾ point; I know that chamber was ¾ full, and, if ready, I give them a new case; I change the paper to a white one, and place it on top of the circle.

With this method, one has only to glance at a hive to know if it is in need of his inquisitive eye, or not.

Prophetstown, Ills.

BEE-HIVES.

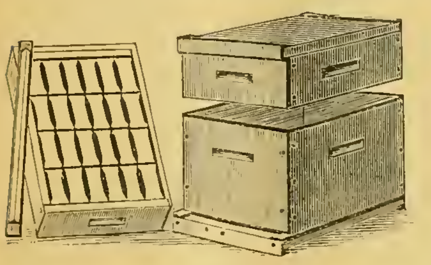
Their Construction for Simplicity, Utility and Cheapness.

Written for the American Bee Journal
BY SMITH & SMITH.

It was said by a correspondent in the AMERICAN BEE JOURNAL, a short time ago, that the "coming hive" was one that would take a standard Langstroth frame in size, with a wide, stiff top-bar; and a hive that would give the best results, and cost the least money—or words to that effect. We agree with this correspondent, and as there has been much said both *pro* and *con* about wide top-bars, we wish to give our views of the subject.

After using a top-bar 1 7-16 inches wide, for 19 years, we know that, if properly made, they will almost invariably prevent brace-combs.

We will describe the hive and top-bars, as we think they should be made, and to aid in making it plain, we here present an illustration of the hive and super.



We call this "The Poor Man's Langstroth Hive" on account of its cheapness, which is obtained by its simple construction, and doing away with everything not absolutely necessary.

The engraving represents a 1½-story, 8-frame, Langstroth hive for comb honey; the top raised above the hive being a super, the same as the one at the left, and has a plain board top or cover. The size of the brood-chamber is 20¼x13⅜x9½ inches, outside measure, with scant ⅜-inch bee-space above the brood-frames.

The super is the same size as the brood-chamber, but is only 4¾ inches deep, and it also has a bee-space above the sections. The edges of the hive and super are all square, and rest squarely upon each other, to do away with all dummies, false ends, section-holders, etc. We use a combined wood-and-tin **T**, and as the supers are rabbeted at the top, the same as the hive, and the **T** being ½ inch wide, there is good finger room to handle the sections. A **T** is also used between the rows of sections at the top, to prevent the sections from racking or getting out of shape. When the sections are filled, they are perfectly square.

The frame is the standard Langstroth, except the top-bar is 1 7-16 inches wide, and ⅜ of an inch thick down to the square. By looking closely at the end-bar, standing at the left of the super, it will be seen that it is **V**-shaped, but the **V** is not as wide as the bar. Right here is one of the advantages of it—the bar proper being 1 7-16 inches wide, and the **V** only 9-16 of an inch wide, we have a flat square on either side of the **V**, of ¼ inch. When the comb is built out, it is not as wide as the top-bar, and the bees are not inclined to draw it out and over the square edge of the bar, as they do where the **V** is the full width of the bar, giving a slanting edge to run over. Do all see the point? With the use of this top-bar, there will be no brace-combs, hence there is no need of a honey-board.

As we stated at the beginning, we have used this width of top-bar for 19 years, and we have had no use for a honey-board in our apiary, nor have we been troubled with brace-combs, and in all of these hives use by others, not one word of complaint have we heard about brace-combs; and a honey-board has never been used on one of the hives, to our knowledge.

The points of cheapness are these: There are no honey-boards, no extra supers, crates and section-holders; and no outside covers, or bands for tiering up, etc. There is nothing to get but the brood-chamber, an 8-frame super, and the sections, when you have a complete hive, and one that will give the best of results for either comb or extracted honey.

Two supers will make a brood-chamber, and can be used for extracting from, or one brood-chamber may be placed one on the other.

We do not wish to be understood that we think this is *the* "coming hive," but we do say that it is a very near relative to it, on account of its cheapness, simple construction, and good qualities.

HONEY.

Its Great Value as Food and Medicine.

Written for the American Bee Journal
BY REV. STEPHEN ROESE.

In early days, honey was of more value as food and medicine, than at present; during the Old Testament dispensation, honey is spoken of with great praise. Palestine — the land promised to the descendants of Abraham—was said to be the land where milk and honey floweth; David, the sweet singer, knew of no better illustration than to compare the preciousness of the word of Jehovah, to honey and the honey-comb; and as a proof that ancient Israel made use of honey as food, we read that Samson, Jonathan, and John the Baptist ate it, the latter subsisting wholly on locusts and wild honey.

With ancient Greece, honey as food and medicine was highly thought of, for they considered it as the food of their gods (Ambross), and even Zeus, who was trained and instructed by the honey-nymph, Melissa (according to their saying), understood the art of mixing honey-drinks, to put his father Chronos to sleep, before he would attempt to attack him; and the ancient Greeks claimed that honey originated in Heaven, and that it came from thence in the form of dew—that it was too precious to be produced by bees.

According to Diodas, of Sicily, honey constituted a staple article of food in Italy; they claimed, even, that it prolonged life, and prevented disease. Enormous quantities of honey were used in that country, and all sorts of fruits were by it preserved, and eatables and drinks sweetened.

Even the powerful ancient Teutons (Germans), who did not know how to make their eatables palatable (like the ancient Greeks and Romans) with honey, yet they understood, and knew how to value honey in the preparation of their national drinks (*Met*); and on all occasions, at their festivals, they drank freely, and felt themselves translated into *Wallhalla* (the region of perfect bliss), and great quantities they must have prepared and always had on hand, for when, in the year 1015, at Meisen, the enemy had set fire to the city, and water being scarce in the city, they extinguished the flames with *Met*. According to Rheinish legends, the Schœffen (Justice of the Peace), had at every day of each court sessions, a pail of honey-wine placed in his office, so full that a fly sitting on the edge of the bucket, could drink out of it. But enough of this.

Honey during the past ages, constituted a staple article as food and medicine, and much more so than in our days, and what is the cause? The first cause is the immense manufacturing of cane-sugar, which has found its way to every family of the land; and although honey is on a level with it in price, yet the latter is crowded out.

Second, the immense manufacturing of vegetable sugar, from the sugar-beet, to the finest apple jelly, and their manufactured sweets combined, have nearly banished honey from every hearth; and as medicine, honey has been substituted by glycerine, etc.

The ancient Romans knew that honey was a great preventive of disease, and an important medicine for epidemic diseases. Experience and medical skill is teaching the present population of this world, with still more force, that honey is forming the connecting link in Nature's remedies, which none other of Nature's products can do; and, consequently, a large field lies here open for honey, as the sole agent which no other product can fill.

The writer keenly asserts, that there is no better remedy in the kitchen, drug-store, or in any school, which can fill the place of honey in cases of croup, diphtheria, *La Grippe*, bronchial affection, asthma, consumption, and all diseases of the blood and bowels.

When during the pilgrimage to Mecca, a dreadful epidemic raged—where millions were in camp around the city of Mecca, thousands died daily, and physicians and their medicines proved of no avail, a messenger came hastily to the prophet, saying, "The faithful are dying by thousands daily." The prophet answered, "Tell the people to eat honey." The same messenger came again, saying, "The faithful are alive, and dead," in one minute; and the physicians declared the epidemic uncontrollable. "Tell the people," the prophet replied, "to eat honey;" and again the messenger returned, saying to the prophet, "The pilgrims are falling like snow-flakes." "Once for all," replied the prophet, angrily, "tell the people to eat honey, and honey alone, as medicine!"

The writer takes liberty here to say, that by his experience and observation, honey has proved in all cases what is claimed for it as a remedy for worms, a relief for constipation, an invigorator of the blood, and a regulator of the liver and bowels; and there is no better way to bring these truths before the public, and place honey on its former standard, height and level, than the broadcast scattering of the Honey Almanac.

The writer never made free use of honey until the Honey Almanac claimed it to give warmth to the system, for elderly people; and having suffered for over three years past from cold feet, poor circulation, and an irregular pulse, I made it a practice to use it freely, and on every morning, the first thing I would take a cup of hot water with a spoonful of honey diluted and taken as hot as could be drank, and the same at retiring at evening, and the result has been a marvelous cure. The temperature below zero this winter is not dreaded like it was when the writer called at the BEE JOURNAL office three winters ago, nearly frozen, sick, and poorly looking, expecting a home soon with those residing in graveyards; and a gain of flesh from 143 to 153 pounds tells the story of all.

Maiden Rock, Wis.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Mar. 20.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj E Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Hartford, Pa.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

SELECTIONS FROM
OUR LETTER BOX

The Union and Its Work.

In regard to the officers elected for the ensuing year, I am very much pleased, as I think that the Bee-Keepers' Union has done a great work for the bee-keepers of the different States. I hope that the work may grow in interest until every bee-keeper in the United States will become a member. I think that it is a grand movement, and all should become more interested in the work.

I have 47 colonies of bees, packed in chaff hives, which seem to be wintering nicely so far. My crop of honey for 1889 was 1,950 pounds of extracted, and 150 pounds of comb honey, from 39 colonies, spring count. MILO GEORGE.

Bowling Green, O., March 3, 1890.

Wintering Bees.

It seems to me that bees would winter better near the ground, but experience says such is not always the case. I have a colony of bees upstairs in the gable-end of a shop, about 14 feet from the ground, that came out as strong last spring as any colony in the apiary; the hive is on a shelf, with the entrance through to the outside; this same colony was the first to carry in flour about a week or ten days ago. As the weather was so nice, and the bees inclined to borrow honey without leave, I thought that artificial pollen would give the bees something to do. I have noticed that bees that winter in trees, come through sometimes in as good condition as in the best chaff hives. I remember one, in particular—a tree that I helped a neighbor cut down, and transferred the bees to Langstroth frames, two years ago the tenth of last May, or a little later. The bees were about 30 or 40 feet from the ground, and the combs were 7½ feet long, well filled with honey, brood and pollen, and a great lot of bees. C. A. BUNCH.

Nye, Ind., March 23, 1890.

The Management of Bees.

In the fall of 1886 I bought 1 colony of bees in a box-hive, and during the winter I read all the works on bees that I could get hold of, including a year's numbers of the AMERICAN BEE JOURNAL, which a subscriber was good enough to lend me. In May I transferred the bees to movable frames, made them into 4 colonies by division, and they stored 60 pounds of honey, besides getting enough to winter on. The next year I bought an Italian queen, and reared nine from her. On Oct. 1, I had 14 good colonies of bees, 200 pounds of honey in one-pound sections, besides a lot of brood-frames full of honey—perhaps 125 pounds.

In 1889 I increased my apiary to 21 colonies, took 800 pounds of honey in one-pound sections, and a lot in brood-frames. I practice tiering up; put separators on the first case of sections, and none in any of the others. I sometimes have a little trouble to get the bees to work in the sections, but I do no not let up on them until they do. If a colony casts a swarm, take out four of the fullest frames of brood, put empty frames in their place, and put them back on one hive. I fill the brood-chamber with combs full of honey, and put a case of partly drawn sections on, when they have them filled in two days. I winter the bees in the cellar, and have yet to lose my first colony. GEO. T. GUNN.

Wall Lake, Iowa, March 3, 1890.

My Experience with Bees.

I began in the spring of 1887 with 6 colonies of pure Italian bees in old-fashioned hives. I bought new Langstroth hives, but did not get any swarms, and but 175 pounds of surplus honey. In the spring of 1888 I bought 6 more Italian colonies, at a sale, all in the old Langstroth hives; I increased them to 26, and in the spring of 1889 I put on the summer stands 20 strong colonies, which I increased to 38 that season, and sold over 1,200 pounds of honey in one and two pound sections, and we have honey on the table every day—the healthiest spread for children that I know of. I had been keeping bees in Iowa until late last fall, when I moved to this State, and will try the business here. I think that bees will do well here, for we have plenty of maple and basswood. I think that the AMERICAN BEE JOURNAL is a grand teacher to all bee-keepers. I was asked quite frequently what was the cause of all the bees dying, yet having plenty of honey. By inquiring, I found that the bees had the diarrhea, and the honey which the bees had eaten, had been frozen. I lost several colonies by the same cause last spring. In this State every one leaves the bees on the summer stands the year round; some packed with chaff, and some are not packed. J. S. PYFER.

Salem, Nebr., March 3, 1890.

Hard to Keep Bees Quiet.

We put about 100 colonies into the cellar, and have had some trouble to keep them quiet. Some colonies have thrown out some brood. We like the BEE JOURNAL and the HOME JOURNAL very much, and their general circulation would do great good. S. P. HEACOCK.

Dudley, Iowa, Feb. 28, 1890.

How a Boy Cures Bee-Stings.

On page 124, I read a letter telling how to cure bee-stings. I am only a little boy, but I know what it is to be stung by bees. My Pa keeps bees, and I help him to take care of them. I am generally bare-footed in swarming-time, and am quick on foot when they begin to crawl up my pant's-legs, and sting. My cure for stings is lemons. Take a fresh lemon, pare, and press the juice on the sting, and it will stop the pain, and keep the swelling down. Or take flour and honey, and make a paste, and bind it on the sting.

I do not take the BEE JOURNAL, but my Pa does, so I have the pleasure of reading it, and I like it very much. Pa's bees are wintering nicely. We have had a pleasant winter so far, with very little snow. I will be old enough to vote in eleven more years, then I will try to keep bees and write for the BEE JOURNAL. WORTHY E. STONER.

Atlantic, Iowa, March 4, 1890.

Hive-Entrances and Ventilation.

I would like to ask the readers of the Bee Journal, how they close the main entrance to hives in moving them from one place to another, in and out of the cellar; and close them in the spring and fall when the sun shines, and yet the air and ground is so cold that if the bees leave the hive, they will chill and die before reaching the hive again, this being one cause of spring dwindling. In short, we often wish to close the hive, and yet want ventilation from the main entrance.

Berlin, Wis. A. N. DeGroff.

The Weather and Bee-Keeping.

The weather has been very warm here, but it has "caught cold," and has been very cold for the last twelve days, being at zero and 15 degrees below. The wind has been in the northwest for some time. To-day it is a little warmer, and the wind is in the south. On Feb. 18 I put 4 colonies out of the cellar, and let them have a good flight. I have made a pair of comb foundation molds, and they work splendidly. They are 11x11 inches. I can make foundation enough in one day, to put into 3,000 sections, and the foundation is very nice.

C. A. Goodell.

Gathering Honey in Florida.

Our bees are gathering honey yet from the willow, and also from the huckleberry. Orange trees are budding out very fast, with a few blooms open, but the harvest will not commence before March 1. Prospects were never better than at this time, for a fine honey season here. The saw palmetto is budding out very prolificly, and will be, from present indications, earlier than usual. There are thousands of acres all along the river, back of the swamp. We are satisfied that there are no better places than along the river here for honey. We will extract, the coming week, to get all the combs clean of mixed honey, so as to get the orange honey in all its purity. The weather is extremely fine and pleasant.

John Craycraft.

St. Francis, Fla., Feb. 15, 1890.

An Experience with Bees.

I had one colony of bees from the fall of 1888, which wintered all right, and I bought 3 colonies of hybrids in the spring of 1889, for $9.00. I took about 80 pounds of comb honey, and have 6 colonies in winter quarters. One swarm left me, and another good colony was destroyed by the hogs entering the bee-yard. My good wife died last year, leaving me, and one daughter 6 years old. I am 36 years old, and feel lonesome. Fred Vollmann.

Monroe, Wis., Feb. 26, 1890.

Carniolan Bees and Robbing.

Mr. N. W. Afflerbaugh, on page 124, reports that he had a colony of Carniolan bees last season that were very prolific, very good workers, and filled the surplus boxes rapidly, but which made a general raid on his Italian colonies as soon as a honey-dearth came on, "passing in and out of every hive that he had on the place.... In the morning they would be up before the Italians," etc. Surely, a splendid testimonial for Carniolans, and yet, by a strange process of reasoning, Mr. Afflerbaugh decides to destroy the stronger race, and save the weaker. It is a pity, for the weak is very commendable, but I hope that Mr. A. will not always carry out his idea to *destroy* the stronger. When Mr. A's neighbor gets a few Carniolan queens, his colonies will find profitable employment over at Mr. Afflerbaugh's, in carrying off the stores which the poor Italians had worked so hard to gather from the flowers which Carniolans had first visited.

But now, seriously, are Carniolans given to robbing the weaker races? No, sir! I need not attempt to explain what causes led to the robbery in the above instance, but from my experience with from 50 to 100 colonies of Carniolans for the past five years, I am sure that they are less given to robbing than any other race. For ten years previous my apiary consisted of the same number of Italian colonies, and I am very positive that I then had more trouble with robbing than since. I believe that I was the first to make the claim that "Carniolans were most exempt from robbing of any known race," and now that claim is made good, by a very extended experience. Let us have more reports of this new, conquering race.

Oxford, Pa. S. W. Morrison, M. D.

The Last Season's Results.

I commenced the spring of 1889 with 28 colonies, increased them to 48, by natural swarming, and took off 2,800 pounds of comb honey in one-pound sections, and 700 pounds of extracted honey. I sold most of the comb honey at 10 cents, and the extracted honey at 8 cents per pound. This made an average of 125 pounds to the colony, and when sold it brought $12.00, making, in even numbers, $336 for the year 1889. Bees were put into the cellar in good condition. Clark Pemberton.

La Moille, Iowa, Feb. 28, 1890.

Cold Weather—Robbing.

The cold wave has struck this village, and the ground is covered with snow, while the wind is coming from the northwest freezing cold. The probabilities are that all manner of small fruits are killed in the buds. My bees are in good condition for spring work. I have been feeding them on honey and rye flour. The combs are well filled with brood in all stages, from the egg to the full-grown bee emerging from the cells. Last Monday was a warm day, the sun shining brightly, and the bees were out in full force, busy carrying pollen and honey which they gathered from the bloom of the maples; but they have retired again to winter quarters, and utterly refuse to do any out-door work until fair weather. Last spring one of my colonies made an attempt to rob another; I move the hives inhabited by the contending bees, placing each on the stand previously occupied by the other. Each colony immediately settled down to business, and gave me no further trouble.

Lodowick D. Henderson.

Staunton, Ills., Feb. 28, 1890.

Granulated Extracted Honey.

On page 123 of *Gleanings*, Mr. J. A. Buchanan, a very successful seller of extracted honey, and, I presume, an expert in the production of the same, advised this in a recent bee-paper: "adding something to the honey that will retain it in the liquid state." In opposition to this, Mr. G. W. Demaree, on page 117 of the Bee Journal, says that the granulation of honey "should be accepted as a matter *in course*, and the minds of bee-keepers should be directed towards the best methods of handling and popularizing the article."

I make the production of extracted honey a specialty, and am often compelled to buy honey in order to supply the demand. I never attempt to keep my honey from granulating—but I do endeavor to impress upon the minds of my customers that the granulation of honey is in accordance with nature, and also, inform them how to reduce it to the liquid state without destroying its natural flavor. Of course, some people claim that my honey is not pure—but "all the same," the large majority of my customers prefer the honey to be granulated, and I shall not make any attempt to keep them from enjoying their preference, but shall go straight ahead in the line suggested by Mr. Demaree.

As to the style of package, I find that tin pails with tight covers, *not* "strictly air-tight," holding respectively 6½ to 25 pounds of honey, are very desirable sizes. I retail 6½ pounds of extracted honey for $1.00, and 25 pounds for $3.00.

Bees are wintering in fine condition, and the prospect for a large crop of clover honey the coming season is very good.

Fancy Prairie, Ills. P. J. England.

Gathering Pollen Early.

Yesterday was one of the warmest and finest days for winter ever known in this vicinity—the mercury being 69 degrees in the shade. Bees were out very lively, and and bringing in pollen in great quantities, and large pellets at that. This is the earliest known at least for 18 years, since I have kept bees. For bees to bring in pollen in the winter, is something remarkable in this section—60 miles north of New York city. The earliest I had known was on March 6, some years ago. The bees have had many flights this winter, and of course they have wintered well out-of-doors on the summer stands. M. D. DuBois.

Newburgh, N. Y., Feb. 27, 1890.

Easily Poisoned by Bee-Stings.

I am a sort of assistant bee-keeper to my wife, who has been engaged in the business the past two seasons. I would enjoy it tolerably well, were it not for some of the peculiar eccentricities of the bees. They will just "go for" *me*, while they will treat my wife with considerable deference. There is poison lurking in the "hive and honey-bee" for me. I am very susceptible to poison from sumac and ivy, as well as from bee-stings. Sometimes slight stings, even on my hands, will result in the swelling of my eye-lids, accompanied with a burning, itching sensation about the eyes, as well as other parts of the body, producing very nearly the same effect as poisoning from sumac. I was poisoned this winter, with the same effect as from bee-stings, while cleaning the propolis from sections. Can some of the bee-fraternity tell me whether propolis is a poisonous substance? or was this particular propolis gathered from some poisonous plant?

We are wintering some of our colonies on the summer stands, packed in old boxes with planer shavings, and they are apparently doing well. We put the remaining colonies into the cellar about the middle of November, some of them going in rather light in stores. The cellar is warm and dry, being affected, to some extent, from the heat of a furnace in another part of the cellar. The bees have been very restless all winter, and have come out of the hives in large numbers and died. Some are now in fair condition, while other colonies have consumed their stores, and have to be fed. One colony died, with candy (made according to the recipes in the Bee Journal) over the cluster. I think that it was too hard. Two colonies showed signs of diarrhea, and we took them out for a flight on a warm day, which proved an effectual remedy. We could not keep bees without the American Bee Journal. Asa Morse.

Stanton, Mich., March 4, 1890.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50. ..	1 40
Bee-Keepers' Review........	1 50....	1 40
The Apiculturist............	1 75....	1 65
Bee-Keepers' Advance	1 50....	1 40
Canadian Bee Journal.......	2 00 ...	1 80
The 7 above-named papers	5 25....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25.. .	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00 ...	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
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Convention Hand-Book......	1 50. ..	1 30
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Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th. 1890. D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

A New Method of Treating Disease.

HOSPITAL REMEDIES.

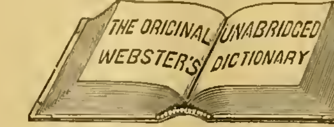
What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.

51D26t 1m1y.

WONDERFUL

Nearly every one is familiar with the name, but it has been estimated that only one in every 280 persons in the United States is fortunate enough to have access to the valuable information contained within the covers of the grandest work ever written by mortal man—WEBSTER'S UNABRIDGED



DICTIONARY. That this is an unfortunate state of affairs will be admitted by all, and it is due to the fact that no one save the rich could afford them.

The Dictionary is a necessity in every home, school and business-house. It fills a vacancy and furnishes knowledge which no 100 volumes of the choicest books could supply, and all, young or old, educated or ignorant, rich or poor, should have it within reach, and refer to its contents every day in the year.

The "Loomis Re-print" contains all the matter as compiled and arranged by our esteemed and honored author and statesman—Noah Webster. About 40 years of his life was devoted to this great work and when we consider the fact that this book contains about 100,000 words with their correct spelling, derivation and definition, we will appreciate that these years must have been well spent.

Some idea of the magnitude of this book may be gained from the fact that it contains over 440 cubic inches of paper, and has about 300,000 square inches of printed surface. This is a cheap, re-print edition without illustrations.

In addition to the 100,000 words, it contains a portrait of the author, together with his biography, and a valuable table of 12,000 synonymous words.

OUR SPECIAL OFFER

For this valuable Dictionary is as follows: We will club it with this Journal one year—both for $3.25. Or, we will sell the Dictionary alone for $2.50. Or, we will PRESENT it to anyone who gets up a club of 10 NEW subscribers to either or both of our Journals, and sending us $10.00 to pay for them.

These prices are for the Dictionary delivered at the Express Office in this City, or packed with other goods.

We will send it, post-paid, to the destination for 68 cents additional.

This immense book, wrapped for mailing, weighs 8½ pounds.

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Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

HONEY AND BEESWAX MARKET.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1421 Fifteenth St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.
M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, March 6.—The demand for honey is improving a little, but it is no better in prices. White 1-lbs., 11@12c.; white 2-lbs.; 10@11c.; fall 1-lbs., 9@10c.; 2-lbs., 8@9c. Extracted, white, 7c.; dark, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Feb. 22.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 12@13c.; 2-lbs., 11@12c. Basswood 1-lbs., 11@12c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

NEW YORK, Feb. 26.—Market quiet, especially on comb honey. Prices irregular, ranging from 9@13c., according to quality. Extracted is moving fairly well at prices we give on page 60.
HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

KANSAS CITY, Feb. 26.—Demand is light. Fancy 1-lbs., 13c.; good white, 12c.; dark, 8@10c. Two-lbs., white, 10@11c.; dark, 8c. Extracted, white, 6@7c.; dark, 5c. Beeswax, 22c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, March 6.—Honey is selling quite well in a small way, at 12@13c. for white 1-lbs., and 10c. for 2-lbs.; dark is slow at 8@10c. Receipts are heavier than usual for this season of the year, but all is called for as fast as it arrives. Extracted is dull at 6@8c. Beeswax, 25c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Feb. 24.—Best 1 lbs., white, 15@16c; best 2-lbs., 14@15c. Extracted, 8@9c. Sales are slow.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON,
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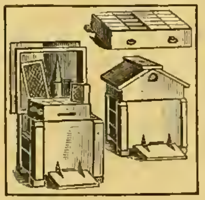

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CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. March 22, 1890. No. 12.

Let Every honey-producer prepare for a large crop of honey during the coming season—work diligently to secure it, and at the same time create a *market at home* for his product. This will not only be money in his pocket, but it will also relieve the markets of the large cities, and consequently enhance the price of honey everywhere. A little *forcsight* in this respect will prevent low prices, and facilitate the honey-trade.

☞ The following, received on March 10, 1890, speaks for itself:

> The goods I ordered came by express the same day that your receipt for the money arrived. I am very well pleased with the articles you sent me, and also with your promptness in sending them.—John H. Rohrer, Tippecanoe City, O.

"Five to Ten Tons of comb honey each season," should have been the reading in the last paragraph of Mr. J. V. Caldwell's article on page 184, when stating the amount of honey produced annually by that veteran bee-keeper and interesting writer—Mr. C. H. Dibbern.

The Only Weekly bee-periodical in America is the American Bee Journal—the "Canadian" is now published only on the "1st and 15th of the month," at $1.00, with premium, commencing with March.

For several years the American Bee Journal was the only bee-periodical on this Continent—many others grew out of it, but only a very few came to stay. The Weekly in Canada, by dropping down to a semi-monthly publication relinquishes the Weekly field to us, which we shall occupy and strive to fill so full that no one else will think of such a thing as to presume to divide the field with us—our motto is Excelsior!

Bee's Honey.—Mr. John Craycraft, of St. Francis, Fla., writes thus about an appropriate namo for honey:

> I do not like "digested nectar," "modified," and the various names that are suggested for honey. Let us call it by its proper name—"bee's honey," as we call milk, "cow's milk," "goat's milk," and eggs, "hen's eggs," "duck's eggs," etc., and let us call extracted honey, "bee's honey from the comb," and that not extracted, "bee's honey in the comb."
>
> Would not this sound more pleasant—more like purity—be more in accord with the good provisions of Nature?—and would it not add faith as to the purity of the honey—as to its being the product of the bees? Let us call the work of the bees—"bee's honey."

You forget, friend Craycraft, that there is no similarity of production. "Milk" is generated and *made* by the cows and goats, as food for their young. "Eggs" are *made* by natural processes in the body of the hens and ducks, in order to reproduce themselves; but neither is true of bees. The honey is *not* produced, generated, or made *in the body of the bee*—that is done by Nature in the flowers, and the bees are simply the gatherers and depositors of it in the hive, to serve as *food* for themselves and their offspring. There is no harmony in the thought, nor adaptability in the expression of Bee's Honey. You might as well use the expression, "man's apples," "squirrel's nuts," or "man's potatoes," because they are gathered and stored by men and squirrels for future use, as to use the expression, Bee's Honey, because the bees gather it and store it in their hives for the use of themselves and their offspring. The simple word "Honey" is much more expressive and appropriate.

☞ Mr. Heddon's son "Will" is to take charge of the electric-light plant in Dowagiac, Mich., as soon as it is completed. While the pursuit of bee-keeping thereby loses its "greatest light"—the electric light will get him. The Bee Journal congratulates the young man, and wishes him much success. Now "let there be light"—refulgent, bright and sparkling.

☞ The Lewiston, Maine, *Journal* has the following complimentary remarks, for which we make our bow:

> The American Bee Journal, published by Thomas G. Newman & Son, Chicago, in its 26th volume, has age to recommend it, ability to back it and make it progressive; while one dollar a year is dirt cheap for its 800 quarto pages, and no bee-keeper can afford to do without it.

The Most Remarkable religious services ever held in New York were probably those conducted at mid-day during Lent by the Rev. Phillips Brooks, of Boston, in old Trinity Church, New York. The attendants were mostly bankers, brokers, and rich men from Wall Street and downtown. "Frank Leslie's Weekly" illustrated the stirring scenes last week.

The Weather Prophets were "all at sea" about the past winter. Prof. Blake, in his Pamphlet of Weather Predictions for 1890, gives the following on page 28:

> In the States of Ohio, Michigan, Indiana, Illinois, Missouri, Iowa, Wisconsin and Minnesota there will be very great extremes, both as to temperature and precipitation, and on account of these extremes, I have made the most elaborate and careful calculations possible. The "Tables for 1889" show that next winter will start early and be very cold till the end of the year. This very cold weather will continue throughout the winter and until pretty well into March. I do not look for any regular "thaw" during the winter in the more northern States, though there will be thawing days at times and some mild spells, especially in the early part of February. In the pineries of Michigan, Wisconsin and Minnesota, I do not look for a large amount of snow during the winter months; still, I think there will generally be enough for lumbering purposes, as considerable snow will fall there in November, and it will probably remain unmelted throughout the winter.
>
> I think these autumn snows, together with the moderate amount of winter snows, will be ample for lumbering. In all of the above-named States, there will be good snows in the late fall of 1889, and in part of them pretty good winter snows.

The reader will laugh at the utter absurdity of the predictions, viewed in the light of the facts in the case!

The Old Proverb. "That there is no one so far from the market as he that has nothing to sell," is certainly true; yet it is equally true that there is great loss, sometimes, by not having created a market in which to sell. Bee-keepers need to have no fears about the over-production of honey, if they will only develop their home markets. Now that the Honey Almanac has been published and *tried*—the home markets are ready fields in which to operate. In every case where they have been judiciously distributed, a ready demand has been found for all the honey on sale in that locality. Many open their eyes when they learn the many uses for honey. The education of the masses has been sadly neglected on this matter, and when the claims of honey, both as food and medicine, are set forth, the people are glad to hear and believe them. They test them and are satisfied. Cover your home markets with Honey Almanacs, and in return reap golden shekels.

Meat Three Times a Day is more than average human nature can endure. Functional disturbances of the liver, gall-stones, renal calculi, diseases of the kidneys, dyspepsia, headache, fits of ill-temper or of the blues, irritability and general absence of the joy of life are largely due to an excess of meat and other highly concentrated food. What shall we eat? We reply, eat more fruit.—*Medical Classics.*

The Bee Journal advises all to eat more honey, as well as fruit. Peaches and other fruit cut up and lightly covered with honey and cream, will, when eaten, give to the stomach a healthy tone—and who can say that it is not delicious?

GLEAMS OF NEWS.

Jamaica Exhibition in 1891.—Mr. C. O. Magnan, of Kingston, Jamaica, British West Indies, Secretary of the Jamaica Bee-Keepers' Association, has sent us a copy of the Regulations and Forms of Application for Space at the Exhibition to be held on the Island of Jamaica in 1891. Accompanying it, was the following letter, which gives information about the exhibit to be made by bee-keepers interested in that project, which doubtless will be an excellent showing of the progress made by the various industries of the world:

KINGSTON, Jamaica, B. W. I.

I wish to draw the attention of American supply dealers, to an Exhibition to be held in Jamaica, in January, 1891; and to inform them that a special pavilion has been set apart for the exhibition of bees and bee-keeping appliances.

As the Exhibition will be held in the middle of our honey season, and as the managers hope to attract many visitors, not only from Europe and the United States and Canada, but also from Central and South America, and the other West Indian Islands, it would appear to be a capital opportunity for showing up modern bee keeping appliances in this part of the world.

The Jamaica Bee-Keepers' Association have been asked by the Exhibition Commissioners to work up the Bee-Keeping Department, and they will be happy to furnish bees for any hives, etc., which dealers might wish to show working, and to do all in their power to show off exhibits to the best advantage.

Should any readers of the valuable AMERICAN BEE JOURNAL feel inclined to send exhibits, if they will communicate with me on the subject, I will procure and forward to them copies of the Regulations and Forms of Application for Space, and any other particulars that they may require. Applications for space must be sent in not later than July 1, 1890.

C. O. MAGNAN,
Sec'ry Jamaica Bee-Keepers' Association.

The White, or Dutch, Clover.—In "The Agricultural Grasses and Forage Plants of the United States," issued by the Department of Agriculture, considerable space is devoted to descriptions of the nature and general usefulness of the various kinds of clover, prominent among which is the little white clover—"the king of honey-plants," as Mr. G. W. Demaree calls it, on page 89.

The pamphlet referred to, says that this clover is a small, perennial species, with prostrate stems which take root strongly at the joints. It is said to be the shamrock of Ireland. It is a native of Europe and Northern Asia, and has been introduced into, and naturalized in, many other countries. It is said that, although indigenous in England, it only began to be cultivated at the beginning of the Eighteenth Century. On account of its creeping habit, when once established, it soon covers the ground and spreads extensively.

An English writer has this to say about its cultivation and value as pasturage for farm stock:

It prospers on mellow land containing lime, and on all soils rich in humus, from marl to gravelly clay. It does better in poor land than red clover. In early spring it produces very little food, and the plant is so dwarfed that it is practically useless for cutting for a crop of hay. Still, perennial white clover forms an essential constituent of every good pasture. All cattle eat it with relish, but it is of less use for the production of milk than of flesh, and is of special service in fattening sheep. It is not suitable for culture by itself, and its herbage is better for cattle when mingled with other grasses, especially with perennial rye-grass.

A correspondent in an agricultural periodical gives his testimony in favor of growing white clover in pasture-lands, as follows:

Every pasture should contain some white clover. It will afford more feed at certain times of the year than grass or any other kind of clover. It will not flourish in damp soils, or those that are very poor. It will do well in a partial shade, as a grove or orchard, but to make the highest excellence it should have the advantage of full sunlight. It is easy to secure patches of white clover in a pasture by scattering seed in early spring on bare places, and brushing it in. One pound of seed is enough to start white clover in a hundred places. The disposition of this clover is to spread by means of the branches that run along the ground and take root.

Prof. W. J. Beal, of Agricultural College, Mich., who is a well-known authority on farm matters, says this about the "bee-keeper's favorite:"

An old, hard road, once abandoned, is likely to send up white clover in advance of the grasses. It is a well-known and highly-prized bee-plant. It is often sown with some of the finer grasses for lawns.

The foregoing paragraphs regarding the great importance of sowing white clover for other purposes than its nectar-secreting abilities, should lead bee-keepers to cultivate this plant more extensively hereafter, than they have ever done before. While sowing it for its excellent use as pasturage for farm stock generally, yet the honey which it yields for the bees will be no small item, when compared with other nectar-bearing plants.

The seed can be obtained at this office, at these prices: Per bushel, $10.00; per peck, $2.75; and per pound, by mail, postpaid, 40 cents.

Bees and Fruit.—Mr. W. A. Webster, of Bakersfield, Calif., writes thus to the *Pacific Rural Press*, on the subject of bees and fruit:

It is the candid opinion of the writer that the injury to fruit which is charged to bees, begins with decay, birds, yellow-jackets and other pilferers, and the offices of the bee are such as are only beneficial in the economy of nature. The province of the honey-bee is to fertilize the blossom and save the nectar from it and from decaying fruit. A bee is guided to its legitimate plunder by the sense of smell, and, I believe, never punctures the skin.

Home, School and Nation, is an illustrated magazine of patriotism, issued under the "American Society of Patriotic Knowledge." It is published at 93 Adams Street, Chicago, and is edited by the Right Rev. Samuel Fallows, D. D., and the Rev. M. L. Williston, M. A. It is a 48-page monthly, and is published at $1.50 a year. It is intended to awake a patriotic impulse in the minds of the rising generation, by giving interesting information concerning the great men whose birthdays occur in the month covered by the issue of the magazine. It is beautifully printed, edited in a style both instructive and highly interesting, and will, no doubt, do its part to perpetuate the patriotic memory of those grand minds, who gave to this Nation its existence and free institutions.

Sweet Clover.—Some desire a further description of *Melilotus alba*, commonly called "sweet clover." Darlington gives this description of it by which it may be recognized:

"Root biennial. Stem at first ascending or oblique, finally erect three to five feet high, stout, striate-ribbed, smooth, paniculately branded. Leaflets one to one and one-half inches long; common pelicles, one to two inches long; ramaces, two to four inches long, on auxilliary peduncles, one to two inches in length. Flowers retrorsely imbricated before opening." It is a native of Europe, but now naturalized extensively in America. The plant, in the latitude of 40 degrees north, flowers from June to August, and fruits from August to Sept.

New Catalogues and Price-Lists for 1890 are received from—

C. H. Dibbern & Son, Milan, Ills.—8 pages—Specialties in Bee-Keeping.

Walter S. Pouder, 175 East Walnut St., Indianapolis, Ind.—8 pages—Bees and Apiarian Supplies.

A. D. Ellingwood, Milan, N. H.—36 pages—Bees and Apiarian Supplies.

J. B. Kline, Topeka, Kans.—8 pages—Carniolan Bees, etc.

C. Aultman & Co., Canton, O.—24 pages—Threshers and Engines.

Charles A. Green, Rochester, N. Y.—80 pages—Fruit Nursery.

Jas. Heddon, Dowagiac, Mich.—40 pages—The New Hive and System, and Apiarian Supplies.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited.
J. N. HUNTER, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

QUERIES AND REPLIES.

Using Comb Foundation when Transferring—Re-Queening.

Written for the American Bee Journal

Query 694.—1. In transferring bees from box-hives, with all the imperfect comb, to movable-frame hives, would it be advisable to use comb foundation in all the frames, leaving out all brood. 2. If desiring to re-queen them, would it be practical to give them a queen at the time of transferring.—Tennessee.

1. Yes; that is, follow the Heddon plan. 2. Yes.—A. J. COOK.

1. Use what good comb you can; the balance of the frames fill with foundation. 2. Yes.—H. D. CUTTING.

1. No. 2. No. It would not be advisable to re-queen at that particular time.—MRS. L. HARRISON.

1. Yes: but of course the brood must be preserved. 2. Yes.—R. L. TAYLOR.

1. Certainly, and follow the Heddon plan for transferring. 2. Yes.—A. B. MASON.

1. No; put in all the brood, and fill all frames not filled with comb, with foundation. 2. Yes.—M. MAHIN.

1. I do not believe that I would like to waste brood, but I would want good combs first or last. 2. Yes, if transferred at a good time for re-queening.—C. C. MILLER.

1. I would advise using all the brood and straight combs. 2. I would not recommend re-queening at the time of transferring.—J. P. H. BROWN.

1. Sometimes combs are nearly enough perfect to transfer, but not often. Ordinarily, I would say melt the combs, and use foundation.—J. M. SHUCK.

1. I should try and save the brood, unless at a season when it would not be valuable. 2. I think that it would.—EUGENE SECOR.

1. Transfer them on the Heddon plan, and let the brood hatch out. 2. Re-queen the last colony to be driven out of the box-hive, and all is done.—C. H. DIBBERN.

1. By all means, transfer the brood, and fill out with full sheets of foundation. 2. Provided you can catch the old queen, it would be practical.—J. M. HAMBAUGH.

1. No! emphatically; we would no more destroy brood than bees. You can straighten a great deal of the comb. 2. Hardly. It would be better to wait until they have somewhat recuperated, or repaired their combs.—DADANT & SON.

1. Transfer all of the brood always, and all good, straight combs, and fill out the hive with frames with full sheets of foundation. 2. Do not re-queen till the colony is settled, especially if robbing is liable.—G. L. TINKER.

1. You can use what is termed the "Heddon plan" of transferring, where there are many crooked combs. In no case throw away brood, for this will be the bees of the future.—G. M. DOOLITTLE.

1. Use the "Heddon method," and you will save all the brood, and get rid of the bad comb at the same time; this plan, too, is the simplest possible, in my opinion.—J. E. POND.

1. I would not transfer the imperfect combs unless they were well filled with brood. Transfer only the best of the combs, and fill out what space is left with frames filled with sheets of foundation. Very many bee-keepers will advise melting into wax all the old combs after driving the bees into hives filled with foundation; but this is a serious waste, if the box-hive contains a fair amount of good combs.—G. W. DEMAREE.

1. If you will read in my book, or Prof. Cook's, my method of modern transferring, you will get a complete answer, which is too long for this department. 2. It might, or might not, be the best time to re-queen the colony—all owing to conditions. Bee-keeping cannot be successfully run by stereotyped rules. The apiarist, to succeed, must know the stereotyped laws, and then form his rules from these laws, and their relation to his special environments and conditions.—JAMES HEDDON.

1. Save the brood, unless it be done at a time when more bees are not required. Fill all the other frames with full sheets of comb foundation. 2. It is practical to do so, but it may not be desirable sometimes to do what is possible. Circumstances may make it very undesirable, robbing may be induced, etc. You must consider the matter, and decide upon the advisability of doing so at the time.—THE EDITOR.

◆

Prevention of Swarming, Building Comb in Wired Frames.

Written for the American Bee Journal

Query 695.—1. Can swarming be prevented by putting on a full upper story for extracting, and then raising the frames full of brood from the brood-nest, and replacing with full sheets of comb foundation, thus allowing part of the brood to hatch above, and use a queen-excluder with the 8-frame Simplicity hive? 2. Will bees build comb in wired frames, with only starters, the same as without the wire? 3. By using a starter in both top and bottom of the brood-frames, would the bees connect both without leaving an opening, and thus save inverting?—Paris.

1. I think so; but I should prefer to have the brood below. 2. Yes. 3. They do in the sections.—A. J. COOK.

1. Not entirely. 2. Yes. 3. After you try it, then you will know all about it.—H. D. CUTTING.

1. Sometimes. 2. Yes. 3. They would generally; and it is a first-class plan to put a narrow starter, say three cells wide, at the bottom.—A. B. MASON.

1. It may retard it, and in some cases prevent it; but there would be many swarms issuing in spite of it.—J. P. H. BROWN.

1. Yes, to a great extent. 2. Yes. I tried the experiment last season, but lost track of the hive after putting a swarm into it.—G. M. DOOLITTLE.

1. I think that it could be controlled in that way, in most cases. 2. If the frames are exactly plumb, yes; but why wire at all, if starters are used? 3. I do not know.—EUGENE SECOR.

1. There is no *absolutely* certain way of preventing swarming, with which I am acquainted. 2. Not with the same facility, or perfection. 3. I have never tried it.—MRS. L. HARRISON.

1. No. 2. No. 3. Please read the best and latest works in apiculture. Study, patience, practice—these three will save many questions.—J. M. SHUCK.

1. I should say that it might, but I have had so many plans for preventing swarming, and failed, that I have no faith in the answer of any one but the bees. 2. Sometimes. 3. I think so. I have had thousands of sections so built.—C. C. MILLER.

1. Your plan is not new. It will retard swarming, and if the queen is not so old as to excite the concern of the bees, it may in some cases prevent swarming. 2. They will build in wired frames, but the wires will not always be found in the center of the comb; and when this is the case, they are hard to manage. The only way is to cut the wires and press the comb in place. 3. It will not do to put starters on the bottom-bars of the frames; the bees will build upward, and the combs will often topple over, and make a muss of it.—G. W. DEMAREE.

1. If the queen were confined below the honey-board, and done seasonably, it would delay swarming; but whether it would prevent it, would depend upon other conditions, as the character of the honey-flow, etc. 2. Yes. 3. I think not, but I never tried it.—R. L. TAYLOR.

1. Swarming can be greatly restricted by giving plenty of room, and plenty of ventilation. 2. They would build them true. The wires would not be in the septum of the comb. 3. If they were to build both from the top and bottom, the combs would not be properly joined at the place of meeting. There would be jogs and off-sets.—M. MAHIN.

1. Yes. 2. No. What do you want wired frames for, if you do not use foundation? Wire is used to keep the foundation from sagging and warping. 3. Try it on a hive or two, and then tell the readers of the BEE JOURNAL how it works.—G. M. DOOLITTLE.

1. Bees are "contrary critters," and no plan can be said to be certain with them. This, perhaps, may work well; try it, and report. 2. Yes; but it is better to use full sheets of foundation. 3. They might, and might not. I do not see how any gain can be made by so doing.—J. E. POND.

1. I think not. You should give more capacity to the queen's fecundity, with less disturbance. 2. Yes; but look out for drone-comb, which is a nuisance. 3. I have not tried starters at the bottom; I hardly think that it will work. Try it, and report.—J. M. HAMBAUGH.

1. Few swarms would result from this management. 2. No. Why not use a more shallow frame than the Simplicity—say a 7-inch frame—and do away with the wired frames? If you use a queen-excluder, the more shallow combs give better results. 3. Yes; but if you put the frames in an upper story, you will not need the starters at the bottom.—G. L. TINKER.

1. Not absolutely, although such a plan would have a great tendency to discourage swarming. 2. Yes, sir; and follow the wires almost every time. 3. The plan will not take the place of inverting. The bees will be very apt to cut away a portion of the lower strip of foundation, and bad work is liable in every case. Inverting does it just right, and cannot fail.—JAMES HEDDON.

1. No system of management can be relied upon to absolutely prevent swarming. At least that is true in America, whether it is so in France or not. The plan mentioned would *sometimes* retard swarming, if it does not prevent it, but it is not a new one. 2. Yes. 3. To build combs from the top and bottom is objectionable—the join in the center is not perfect, etc.—THE EDITOR.

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CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey—One Method of Its Production.

Written for the American Bee Journal
BY H. W. FUNK.

A short time before the honey harvest begins—usually the last days of May, or the first week in June—the first upper story should be put on the brood-chamber, for which I prefer a 10-frame Langstroth hive. The upper stories are just the same as the brood-chamber, only lacking a bottom and an entrance. It adds very much to the pleasure, and probably to the profits (as "time is money" during the honey season), if a slatted honey-board is used between the different stories, to prevent the upper frames from being stuck to the lower ones; an old quilt that is full of holes, may be used as a substitute.

HOW TO MAKE A HONEY-BOARD.

I prefer a honey-board made as follows, to anything else that I have tried: It is made of strips about 1¼ inches wide, and ¾ of an inch longer than the outside of the hive. These are placed a bee-space apart, and just as wide as the hive (outside), and the whole is cleated together by a ¾-inch square strip, that has a groove cut in the middle, half way through, just the same as an old-style Heddon hive-cover is cleated. These end strips keep the board in place, and also keep the upper stories from slipping or blowing off. This board may easily be made break-joint, but I am not sure that it is an advantage.

NUMBER OF FRAMES FOR EXTRACTING.

Where empty combs are used, I put only eight in the upper stories. If comb foundation is used, it is better to use nine or ten frames, till drawn out. It is nicer to extract where only eight frames are used in a ten-frame hive; there will be just about as much honey stored in eight as in ten frames, and it is easier to uncap, as the combs are all thicker than the frames, and they are less liable to be injured in extracting, and probably are not used as soon by the queen for brood. For various reasons I prefer a full-sized frame for upper stories—just the same as is used in the brood-chamber.

PUTTING ON SURPLUS STORIES.

If the intention is to prevent swarming, all strong colonies should have the upper story put on about ten days or two weeks before the season opens. It requires judgment and experience to know where and when to put on the second upper story. If the prospects are good, and colonies are strong, it is advisable to place the second upper story on top of the first, when they have about 15 or 20 pounds of honey stored in it. (Have all colonies strong, as it is a waste of labor to run weak colonies for surplus.)

Should the honey come in slowly, it may be advisable to change the four center combs of the upper story for the outside ones, or remove them and put empty ones in their places, filling other stories with these partly-filled frames. In an ordinary season, with good colonies, there need be but little frame manipulation.

It is always advisable to give plenty of room—more room than is needed does not necessarily do any harm—especially with large apiaries, and with out-apiaries it is advisable to be on the right side. If, however, the first upper story is almost full, it is better to put the second upper story under it—I usually put it on top. One reason is, the queen will be less liable to use it for brood. If there is brood in the first story, and it is raised, and another put under it, the queen will be almost sure to use it also, unless honey is coming in very fast; if it is put on top, she will probably not occupy it.

Another reason is, it is hard work to raise up partly-filled uppers, and one of my rules in running large apiaries, is never to do any work unless I am sure that it will pay; and never leave anything undone that I think it would pay to do.

These upper stories hold about 50 pounds each, when full; it is seldom necessary to use more than two upper stories, but I have used three; usually it is better to extract from the top story, if the bees become crowded for room. In most seasons, these two stories will hold all the early or white clover honey.

WHEN TO EXTRACT THE HONEY.

Usually, I do not extract until the clover season is over, and then I extract both the upper stories at once. To do the extracting, I prefer a four-frame, reversible machine, to anything that I have tried; and for uncapping, the Bingham knife is unequalled by anything in the market. For a capping-can, I use a sawed-off barrel, with a screen bottom, and a honey-gate below it.

In the morning, or before extracting again, I remove the cappings from a previous extracting, putting them in a barrel so constructed that what little honey may drain through can be run off. Usually, after the extracting is all done, I scatter these cappings on a large cloth under some shade-trees, and let the bees remove what honey there is left in them. It requires just a little judgment in doing it, and it is not advisable for a novice to try this, especially if there is no honey coming in. I scatter about a bushel basket of cappings at a time, and spread them out thin.

HOW TO PROCEED IN EXTRACTING.

As the extracting is usually done when there is no honey coming in, it requires considerable care not to get robbing started. A good way to proceed, is to have a cart with a box just wide enough to hang the frames in, and about four feet long. This cart will hold the frames from three or four upper stories. As the frames are put in, they are to be covered with a cloth, if there are any robber bees about.

In opening the hives, I smoke the bees down as soon as the cover is raised the least bit, then pry the frames apart, and take out one and shake off the bees into the open hive, and brush off the remainder. It is well to have a dish of water on hand, into which the brush is dipped, if it becomes sticky with honey, and for washing up any honey that may be daubed about.

When the cart is filled, it is run into the building where the extractor is; the other necessary utensils are about two or more alcohol barrels, without heads, with thin muslin or cheese-cloth stretched loosely over the open end, and held in place by the upper hoop; on this the honey is poured by the bucketful, as it runs from the machine; after standing over night, it is ready for barrels or cans. It is best to leave about six inches of honey in the barrels, letting out the thickest at the bottom. If the honey is not quite ripe, it will improve by being left in these barrels a short time; but the proper place to ripen honey is on the hive.

If robber bees are very bad, a tent may be used to advantage over the cart, and hive which is being opened, but it is very bothersome, and a live man can get along nicely without it.

Sometimes it is advisable to almost close the entrance when removing frames, till after the bees are quiet again; usually I take out the empty frames and return them to the hives when I go for another load. If robbing has been started through carelessness, or otherwise, it is best to leave the frames out of the hives till evening, returning them about sunset.

Returning frames causes more commotion in a colony of bees, and in other colonies, than taking them out—usually only one set of frames are returned after extracting, and the others stored away until needed for fall honey, or otherwise.

If I find frames of brood, I often use them to build up nuclei, or increase by hiving bees with a virgin queen on the Doolittle-swarming-box plan, and add brood for several days as fast as they can care for it, till the hive and upper story are full.

Probably the best way to get rid of the bees in the extracting-room, is to put a cone of wire-screen in the upper corners of the windows.

With the foregoing method I hardly ever have a swarm, and manage out-apiaries without having any one to assist, as there are not enough swarms to pay to have some one to watch them.

Bloomington, Ills.

BEE-KEEPING

In Wandering Apiaries on Mt. Sierra Nevada, Spain.

Translated for the American Bee Journal

BY REV. STEPHEN ROESE.

Mount Sierra Nevada, in Spain, is located 10,500 feet above the level of the sea. Bee-keepers in that country, after the early spring honey-flow is over, do generally experience a dearth of honey, for during the hot summer months there is seldom a rainfall, and bee-keepers are often obliged to feed back their early spring honey crop, to save their bees from starvation; and during this season the wax-moth causes terrible destruction in the apiaries.

During the honey-dearth in the plains, Mount Sierra Nevada is covered with rich honey-yielding flowers, especially on the northern slope, which is covered with fruit-trees of all descriptions. The deep valley of Rio-Monachil is often rich with honey-dew, which extends downward to the plain of Granada. On this plain, from Dehesa to San Geronimo, during the summer months, from 12,000 to 14,000 sheep find abundant pasturage, besides many hundreds of horses. This northern slope is constantly moistened by the gradually melting of the everlasting snows on the summit of the mountain. This juicy pasture is rich with endless blooming flowers.

The transportation of the hives is effected by the use of mules. Each animal carries one on each side, up the narrow, winding path, with occasional halting under an orange or olive tree, from June until October 15; at this time, usually, the first snow falls. The apiaries remain on Mount Sierra Nevada, and on their return, at this date, for the Granada plains, the mountain apiarist comes laden richly with nectar sweets, while apiaries left on the plain are moth-eaten, and on the verge of starvation.

Mount Sierra Nevada, on account of its charming scenery, is visited by many naturalists, artists, and scientists, and it will henceforth be visited by apiarists each season.

PASTOR WEYGANDT'S BEE-LECTURE.

The new theory of Pastor Weygandt, of Flacht, Germany, of applying artificial heat for the purpose of creating an even temperature in winter repositories, has been fully illustrated during his four days' course of free lectures at Flacht, Germany. Sixty prominent bee-keepers from all parts of Germany, Switzerland, and Luxembourg, were seated at the feet of this eminent Gamaliel, and were astonished and surprised at the flow of charming language and revelation of mysteries in apiculture.

This eminent master of the art seems to revolutionize the Continent, and even his enemies cannot gainsay the facts set forth by him.

On April 8, 1890, is the day agreed upon, for the delivery of another ten days' lecture on modern bee-keeping. A programme of exercises is in progress, and will be published in due time. Applicants for attendance were to inform the faculty not later than the last of February.

It is not strange that some connecting link in successful bee-keeping should be missing, in consequence of the total ignorance of the art of bee-keeping during the Dark Ages.

Maiden Rock, Wis.

CALIFORNIA.

Sonoma County as a Bee-Keeping Locality.

Written for the American Bee Journal

BY D. B. WIER.

I gave a little sketch of Sonoma and adjoining counties in California's adaptability for bee-culture, on page 711 of the AMERICAN BEE JOURNAL for 1889. It brought me letters of inquiry from nearly every State in the Union, and several from Europe, nearly all of which enclosed stamps for reply. I answered all quite fully, reserving some for special answer through the BEE JOURNAL on pertinent points that none, or very few, seemed to understand.

The most prominent of these not-understood points that explanations were asked for by many, may be summed up in these two questions:

First, "How can bees store honey, as a rule, every month in the year? Trees and plants do not bloom in winter."

Second, "If you have no rains for four or five months in the year, trees and plants certainly cannot bloom toward the end of such a drouth?"

These are very reasonable questions to ask by those not familiar with a region of warm, moist (often wet, or very wet, like this one) winters and dry summers. Nature adapts plants and animals to their environment. Many trees and plants in this climate bloom and grow only in the winter; many of our native trees and plants begin to grow so soon as the fall rains give them moisture, and then are soon in bloom. Some of our trees and shrubs start into growth—usually blooming first—in November and December; many more in January and February; others, not until March and April. Hundreds of species of trees and plants are now in bloom (Feb. 12); some of these are very rich in honey, and every day for the past three weeks has been bright and warm—the mercury being from 65° to 75° in the shade, enabling bees to work at least six hours each day.

The manzanita, and laurel, which grow in the hills and mountains, are, in different locations, in bloom during the entire winter, and the first-named —one of the very best honey-producing plants in the world—is in bloom on different exposures and elevations in the mountain canyons, from November until June. The wild currants and gooseberries are now in bloom, and will so continue for months, as well as countless other shrubs and plants. By the first of April the whole country is one vast flower-garden. Hill, valley and mountain are everywhere carpeted with flowers of every hue. This much for winter and spring flowers for honey.

Then, on the other hand, in the dry season here, we have thousands of plants that revel, and grow and bloom in the hot, dry season, and plenty of plants between these two extremes. Near the end of the dry season, when our sun is the hottest, and the soil is the driest, our stubble-fields will be seen a mass of golden or purple flowers. Perhaps it is true that near the end of the dry season the bee can find the fewest good honey-plants in bloom; but in the valleys they find plenty that yield very poor honey for us, but I believe it is good enough for winter stores for the bees, if they need any. The plants producing the bad-tasting honey, mostly belong to the compositæ—such as May-weed (dog-fennel, etc.), and here in the valley, the ubiquitous "tar-weed," which "takes the cake" for being where it is not wanted, and for its villainous taste and smell!

The great, and best, and everywhere present in the hills and mountains, summer honey-producing bush, is the native poison-oak (*Rhus Californicus*). It is in bloom in different exposures the season through, and its honey is considered equal to that of white clover.

This short sketch will give some knowledge of the sources of honey here; some of the mountain honey is very fine, thick, bright and spicy—some being too highly flavored for some people, but greatly liked when one becomes accustomed to it. The different portions of the State have their own peculiar honey-plants, and nearly everywhere where there are hills and mountains, one can have success with bees, even high up on the Sierras, where they are covered with snow from 3 to 30 feet deep for six months.

As I said in my former article, this region—directly north of San Francisco 20 to 100 miles—was, before bee-diseases were introduced, grand for honey, and many bees were kept, producing a vast amount of honey with scarcely any care, like all good, new countries; but these diseases came in. It being a region where nearly everything that one may wish to plant can be grown to perfection, with big money in everything, the people dropped bee-keeping for other things that made big money with little care; therefore but few bees are found here now, but the bee-country is still here, all the same, and would be a grand success with the same skill and care given to bees everywhere in the East.

The best locations are, as I said before, in the cheap lands in the hills and mountains, with a deep canyon running into the hills east or west. Given a warm south and a cool north steep hillside, and a little perennial stream running in it—one has a perfect bee-pasturage, and one of the most healthy and comfortable climates in the world. Bees of all strains and bee-keepers' supplies of all kinds can be had in this State. There are thoutands of acres of *mountain* Government land in this and adjoining counties *free* to homesteaders, or for preemption. It is grand for dairies, pasture, fruit, bees, poultry, health and comfort.

As for cold, when I give the fact that three wagon-loads of oranges have come into this little city of Petaluma the present week, and sold on the streets in bushel apple-boxes—all grown within seven miles of this town—tells one what this country is! Homes, land—both improved and unimproved—of all sizes, and for all purposes, can be bought in this county today, all things considered, as cheap as anywhere in this great republic; certainly as cheap, and I think cheaper, than anywhere else in this State; and this, in this one great, rich county, where big crops of everything can be grown without expensive irrigation.

I will continue to answer all inquiries from those who enclose stamps (not directed stamped envelopes—but *stamps*); and I will mail them local newspapers.

Petaluma, Calif.

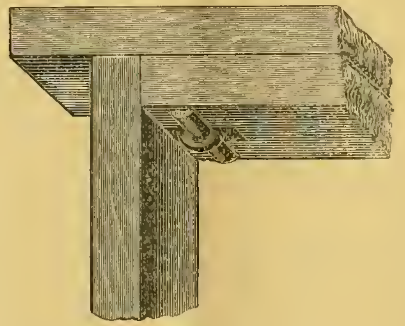
REVERSING.

A Description of a Reversible-Frame Device.

Written for the American Bee Journal

BY F. A. HUNTLEY.

The subject of reversing combs seems to have lost no interest. Many have found the practice a sucess, and others who have been reluctant to make experiments, will, no doubt, take some interest in the matter the coming season. Changes and complications in fixtures should generally be avoided, as experience has often proved to bee-keepers. In experiments, methods are in favor such as will necessitate the least possible alterations in plans already in use.



Section of Reversible Frame, with Eye and Key.

The reversible frame here described, has given me satisfaction, and I offer the device gratuitously to all, hoping that it may prove a benefit to those who give it a trial. With very little trouble it can be applied to frames already in use.

The device consists of a double, separable top-bar, the two pieces being fastened together by means of screw-eyes twisted into the upper slat, and the eye part projecting through a slot in each end of the under slat, which forms a part of the frame, as shown in the engraving. Hardwood pegs are used to put through the eyes, to clamp the two pieces together.

It will be readily understood that a complete frame is made, and the separable part is the outside bar with projecting ends, into which the screw-eyes are driven. The openings to receive the eyes are made with a coarse rip-saw, and can be cut into the block or board before sawing out the slats. As the two horizontal bars of a frame are made alike, it takes but a moment to remove the pegs, and make either bar the upper one.

Where frames larger than the Langstroth are in use, I would advise making the separable bar of wood that is tougher than pine, though I have never found yellow pine too soft. The screws will, in most cases, project through the wood, unless a very thick top-bar is used. When this happens, the points should be cut off by means of a pair of nippers.

I have also used this device in another form, by driving the screw into the frame, and making the slot in the separable bar. This, however, does not possess the strength of the other arrangement.

South Omaha, Neb.

BEE-ECONOMY.

The Inmates of the Bee-Hive as "Nationalists."

Written for the American Bee Journal

BY E. L. PRATT.

What a magnificent form of national social government is that of honey-bees. There is no competition, no trusts or monopolies, no partyism, and no wrangling over ill-gotten gains, in a bee-hive. On the contrary, everything is for the common good, with equal rights to all.

It has been said that a queen-bee is a "monarch," and the masses of workers, her subjects; but the study of them and their habits has proved this untrue. It is the most perfect democratic form of government known. The queen stands as a most decided public servant. She acts as a sort of "president"—a preserver of the republic, at the dictation of the people.

Superseding for want of competency is nothing uncommon with bee-republic. A queen-bee is queen (or "king") because she was called so, when scientists knew but very little about the workings of a bee-hive. She would have been better named "president."

From the egg to the perfect insect, all are cared for and given sup to a like extent. When the young bee issues it has a term of "schooling," and thorough practical training, not in vogue with any form of government. All are ushered into active service alike, and at the same age by common consent. None are expected to do more than others, but all are expected to do their best. The drones (so abused by those ignorant of their habits) stand ever ready to perform their most important duty, for which their very lives are given willingly. Can any one begrudge them their leisure at so great a cost ?

Why is it that human nature so admires the industrious habits and unseen government of bees, as they gather honey and guard their home in perfect harmony, and without complaint ? It is because human nature can see a perfect form of government—a government for the people, by the people, and absolute freedom to every man.

There is no half-starving mass and highly-fed class in a bee-hive. When a bee-republic is starving, all are starving ; when it is prosperous, all are prosperous ; as this bee fares, so fares its brother. There is one common store-house free to all.

In short, a bee-hive employs that perfect national form of government, so admired by the human race. To my mind, this United States will eventually adopt a similar form of harmonious proceedings, as in Bellamy's "Looking Backward."

Marlboro, Mass.

BEE-NOTES.

Interesting Suggestions for the Month of March.

Written for the American Bee Journal

BY DR. J. M. HICKS.

It is now the proper time to make selections from the best colonies for rearing increase of queens ; this is a matter of no small importance to the apiarist.

Queens and drones should, by all means, be reared from colonies possessing the most desirable qualities—such as have a gentle, mild temper, and industrious habits, as well as being very prolific.

In order to succeed well, and get early drones, the bee-keeper should feed a little syrup every day, at this season of the year, to such colonies as above indicated.

It will be just as necessary to keep watch of all other colonies, and cut out all drone-brood, as well as queen-cells, or those not so desirable, before they are hatched.

I am very certain that bees will pay at least 200 per cent. profit, in an ordinary season, with reasonable care and attention. Mine paid me over 500 per cent. last year, and at the present writing (March 3) they are all in fine condition, with plenty of young brood.

Much depends upon the kind, style and shape of the hive used in the management of bees, which should be of such shape and so constructed as to not have any loose pieces to remove in examining the brood-combs—the fewer of such traps about a hive, the better.

Always make the increase in colonies by dividing them at the right time, and prevent, if possible, all natural swarming ; but as before suggested, try to have plenty of young queens in due time to give to the new swarms; this is of much importance.

I would suggest, to make bee-keeping more profitable to the apiarist, as well as much better for all consumers of honey, that there should be only extracted honey placed on the market ; for truly there is not a particle of nutriment in the combs, as food in the human stomach, no matter how fine or delicate it may appear to be.

Honey is procured from the flowers and plants, provided by Nature, and the bees are the industrious workers that gather and store it for man's use. It is folly and absurd to think of feeding bees syrup made from sugar or glucose, and call it "honey." It is a *fraud on its face !*

Always provide plenty of pasture for the bees to work on—such as Alsike clover, buckwheat, raspberry, cherry, apple, pear, plum, of many varieties, all of which are good for honey, besides their delicious fruits.

Indianapolis, Ind.

WISCONSIN.

Report of the State Bee-Keepers' Convention.

The sixth annual meeting of the Wisconsin State Bee-Keepers' Association, was held at Madison, Wis., on Feb. 5, 1890. About 100 bee-keepers were present, a few being from other States.

President C. A. Hatch, of Ithaca, called the meeting to order at 10 a.m,, after which prayer was offered by Mr. A. I. Root, of Medina, Ohio.

Treasurer M. J. Plumb, of Milton, reported that no expenditures of money had been made since the last meeting. The president then read his annual address.

Mr. Wilcox asked for information regarding oak-gall honey. He had seen it, but no one offered any further information.

STRANGE DISEASE AMONG BEES.

The president spoke of his experience last year, in what seemed to him a strange disease among his bees, but by consulting a learned microscopist, he was informed that they were only "played-out" bees.

A. I. Root had also noticed the same thing in his apiaries. The President said the bees came out about 10 o'clock in the morning; they could not fly, but crawled along on the grass like young bees. The whole yard was covered with bees, crawling toward the lower side of the yard. They acted as if stupefied—as flies that have taken poison. Their bodies and legs, too, were covered with a greyish-like dust, which they constantly tried to rub off. His theory was, that they were affected by some kind of pollen. All the bees seemed to be dusted.

S. I. Freeborn, of Ithaca, thought it was connected with the red-clover bloom, that intoxicated them, which was not the case with the white-clover bloom.

Dr. Miller, of Illinois, said that he had not been much in favor of Presidents' addresses, but after hearing the one just read, he was inclined to change his opinion. With regard to the trouble with Mr. Hatch's bees, he was of the opinion that starvation had more than anything else to do with it. As to the dust upon the bees, he could not account for that.

Mr. Taylor, of Minnesota, said that a mess of good, warm food would have relieved them ; he especially recommended that the food be given warm.

S. I. Freeborn was confident that warm weather and honey were the remedies for the trouble.

F. Wilcox had observed the same thing (the dust on the bees), in colonies in the Heddon hives. He thought that starvation was the cause of the trouble.

A. I. Root had noticed it in one colony, that had used up its honey in brood-rearing. They were cured by feeding ; he fixed up a syrup and fed them.

THE CARNIOLAN BEES.

Rev. T. E. Turner, of Sussex, read an essay on "Carniolans."

Rev. Mr. Winter, of Madison, gave a very interesting and amusing account of his experience with the Carniolan bees. He had not found them to be as gentle as Mr. Turner had described them; in fact, he had found them to be the most irascible bees he had ever handled, and their propensity to go out of their way to seek their victims, exceeded anything he ever knew. He remarked that a gentleman who visited him, and being anxious to observe the internal economy of a bee-hive, went with him to his apiary, and on opening a hive of Carniolans, the bees "went for them" pell-mell, and his visitor beat a hasty retreat, saying he would rather face a battery of artillery, than a colony of Carniolans.

D. D. Daniher, of Madison, said that he had had some experience with the Carniolans, but had not found them as gentle as even the Cyprians or the Syrians. After handling Mr. Winter's Carniolans, he found himself industriously occupied in removing stings from his limbs, and combing bees from his hair.

Mr. Turner, who had sold the bees to Mr. Winter, said that they were not pure Carniolans, but hybrids, which would account for their propensity to use their stings.

The question was asked by a member as to the relative number of bees wintering in-doors and out-of-doors. About four-fifths were found to be wintering their bees in cellars.

Mr. Taylor, of Minnesota, was present with a sample hive, which, on motion, he was requested to show, and explain his management. He brought the hive forward, and, placing it upon a table, explained its construction and showed its meritorious points. It is a small hive, 16x16 inches, and somewhat resembles the Heddon hive. Dr. Miller said it had many good points.

BEE-KEEPING AS A BUSINESS.

The next essay read was, "Bee-Keeping as a Business," by Frank McNay, of Mauston.

Mr. Freeborn thought that the qualifications requisite for a successful bee-keeper, were such as fit a man for a mercantile or professional calling, a banker, or for almost any business undertaking; and he must make it a business that the public will respect.

Mr. J. J. Ochsner, of Prairie du Sac, believes in making it an independent business.

Dr. Miller said that men with the same amount of brains required in other callings, can make money, and have lots of fun, in bee-keeping.

OVER-STOCKING A LOCALITY.

The next essay read was on "Over-Stocking," by S. I. Freeborn, of Ithaca.

Mr. Lathrop thought that apiaries ought not to be nearer than 3 miles.

Mr. McNay said that it depended mostly upon the season. Sometimes 5 miles was near enough; he had 350 colonies—about 35 in each. He thought small apiaries were better, as less time was consumed in visiting the pasture.

Mr. Freeborn found the best honey in isolated colonies.

Mr. Root wanted to know about the number of colonies around Boscobel. He visited that locality last summer. In one apiary which he visited, he noticed the bees hanging on the outside of the hives. He thought they ought to have been driven in, and set to work. To the question he put to a bee-keeper near Boscobel, with regard to the number of colonies in that vicinity, he was told that there was no danger of over-stocking; that 500 would do just as well as 200, where there was so much basswood.

Mr. Freeborn had usually only about 150 or 200 colonies in one place.

Mr. Root said that there were never such crops of honey in one place as about Boscobel; yet he thought that the Boscobel people had too many colonies for that locality.

Dr. Miller thought that there ought to be some way of preventing others from coming and settling down with bees, and spoiling the prospect of a crop. What can Mr. Pike do to help it if some man comes and locates his apiary near him, and destroys his chance of getting a crop? It does not seem right.

Mr. Taylor said that we all have to take our chances, and put up with the consequences.

BEE-KEEPING IN CALIFORNIA.

Mr. Freeborn was asked how he esteemed California honey. He said that the white-sage honey of California is very fine, but the sage does not always yield, especially in dry seasons. This winter they have a cheering prospect for the coming season. The white clover is the most popular. He saw considerable of bee-keeping and swarming while he was in California a few winters since; he noticed that church-steeples were favorite resorts for stray swarms.

PLANTING BASSWOOD TREES.

Mr. Root remarked that he had a new hobby. Planting is a pretty slow business. He said, "We are going to buy timbered land, cut out the common timber, and plant basswood trees. Under these conditions, they will be more apt to grow."

Mr. Freeborn asked Mr. Root if he thought they would be of any use to him, when they do grow. All basswood does not yield honey.

Mr. Ochsner inquired if his bees should, in their flight in quest of honey, get a smell of Dr. Miller's grove, could he hinder them from lighting down upon his basswood blossoms, and filling their honey-sacs? He thought that all have the same right to the honey, and for his own part he had no objection to any man settling down next to him with his apiary.

Mr. Turner said that the man who has the most bees, will take precedence, and will "root out" all other men.

ALSIKE CLOVER AND ALFALFA, ETC.

President Hatch—Nobody has said anything about Alsike clover. I have had 25 acres of it, and it will pay to furnish your neighbors with seed gratuitously. I would recommend bee-keepers to try 15 or 20 acres of it. Alsike is not usually influenced by the weather.

Dr. Miller asked if any of the members had tried alfalfa. President Hatch said that he had talked with a bee-keeper who had examined a field of it, but had found no bees working on it.

Mr. Root said he had had alfalfa in his garden, but no bees worked on it. In Arizona, a very dry climate, it is a very productive honey-plant. The honey is very fine, and resembles honey from red-clover, and tastes like humble-bee honey. He furnishes Alsike to any of his neighbors who will sow it. It takes a good many acres to make any show of success.

Dr. Miller said that he had often noticed no bees working on white clover, and yet his surplus comes from white clover. It may be that bees do work on alfalfa. He said that Mr. Hatch made a good point on light soil, which, in his opinion, is much better.

Mr. Root told of a bee-keeper who took nearly all the premiums at a State fair, and got his honey from Alsike, but it took a great many acres to do it.

Mr. Freeborn said that there is only a small proportion of the blossoms that yield honey at any time. This is a fact worthy of consideration. In California, where they irrigate, they are sure of good weather. His experience with basswood was that there had been only five failures in thirty years; two years it failed to blossom.

Mr. McNay said that there are two kinds of basswood in Wisconsin that yield honey; one kind ten days later than the other. The later variety grows in valleys, each yielding honey at about the same age. The extreme limit of the honey-flow is from 11 to 29 days.

Mr. Root said that it was three weeks in his location—Medina, Ohio.

Mr. Freeborn had known colonies of his bees to gather 14 lbs. a day from basswood, five miles away.

COMB FOUNDATION AND ITS USE.

Mr. E. France, being unable to attend, sent his essay treating of "Comb Foundation," to the Secretary, who read it.

Mr. France, in his essay, asked the members with regard to the evaporation of unripe honey.

Mr. McNay said that he did not have to evaporate his honey.

Dr. Miller thought that a bee-keeper who does not wire his frames is far behind the times.

A voice: "How about wooden foundation, or rather, wooden combs?"

Mr. Root had used them, but found they took too much wax. He said that Mr. Aspinwall claims that, with the wooden combs, he can prevent rearing drones. It will do away with swarming, but the expense will be a drawback.

Mr. Root said that cloth had been tried, but the bees gnaw it to pieces.

Regarding the size and thickness of foundation used for starters in sections, Mr. Turner said that he used 10 and 11 square feet to the pound, and it is a success.

Mr. McNay—In a good yield, use small starters, but in a slow yield, use larger ones. The bees fill it full when there is plenty of honey coming in. The slower they work, the more crooked are the combs.

Mr. Markle spoke of a man who was opposed to the use of foundation; but in Mr. Markle's opinion, it is one of the greatest discoveries of the age, and the discoverer is worthy of a monument. Ten-feet-to-the-pound foundation does not make "fish-bone" in the combs.

President Hatch's starters are $3\frac{3}{4}$ inches, and 100 to the pound.

INTRODUCING QUEENS.

Mr. Turner asked a question with regard to the introduction of queens in the fall, and stated that he had no trouble in introducing them when there was no longer any brood in the hives; that under those circumstances the bees could not rear a young queen, and were willing to accept the new queen.

One-hundred-and-sixty bee-keepers reported to the Secretary, as follows: The aggregate number of colonies of bees last spring was 8,187, and 13,087 now wintering. The yield of comb honey last season was 231,640 pounds, and that of extracted was 459,820 pounds.

The report of the finance committee is as follows: Receipts from dues, $43.55; sundry expenses, $19.75; premium awards, $20.00; balance in treasury, $3.80.

The following officers were elected for the ensuing year:

President, C. A. Hatch, of Ithaca; Vice-Presidents, Rev. H. A. Winter, of Madison, and Rev. T. E. Turner, of Mauston; Secretary, J. W. Vance, of Madison; and Treasurer, M. J. Plumb, of Milton.

The following premiums were awarded on honey:

To J. J. Ochsner, for the best display; best and second best extracted clover; best and second best basswood honey; best and second best dark honey; and for second best 12 pounds of clover comb honey, and second best and best 12 pounds of basswood comb honey.

To Rev. T. E. Turner, for best 12 pounds of clover comb honey.

J. W. VANCE, *Sec.*

A Wonderful Weaver.

There's a wonderful weaver
High up in the air,
And he weaves a white mantle
For cold earth to wear.
With the wind for his shuttle,
The cloud for his loom,
How he weaves, how he weaves,
In the light, in the gloom.

Oh! with the finest of laces
He decks bush and tree;
On the bare, flinty meadows
A cover lays he.
Then a quaint cap he places
On pillar and post,
And he changes the pump
To a grim silent ghost!

But this wonderful weaver
Grows weary at last;
And the shuttle lies idle
That once flew so fast.
Then the sun peeps abroad
On the work that is done;
And he smiles: "I'll unravel
It all, just for fun!"—*Selected.*

SWARMING.

What I Know About the Prevention of Swarming.

Written for the American Bee Journal

BY JAMES HEDDON.

The following is sent to me to answer in the columns of the AMERICAN BEE JOURNAL:

I have a neighbor who has made a honey-house. A dry-goods box at least three feet wide, and long, and high, is placed in the loft of his barn, with a large door in front, fitted with a pane of glass, over which a dark curtain drops. Across the underside of the top of the box, slats are nailed, and between these are rows of auger-holes. Above these is placed a bottomless hive, with an entrance cut out through the side of the barn.

The theory is, that the bees in that hive will never swarm, but will keep on filling that honey-house. The honey is to be cut out in the fall.

Now, I have a notion of putting a swarm of bees where they will "stay put," provided I can find any such place; but it seems to me that bees prefer to carry honey up above their brood-chamber, so I wonder why the "honey-house" should not be put on top of the hive, or would the bees have to travel too far before they got up to the top to start comb? The question I wish to ask is, will a colony swarm under such conditions? If not, why not have a home supply furnished in this way, giving one just so much more time to attend to bees in regular hives. KIT CLOVER.

In response to the above, from one whom I do not know, desiring me to write what I know and believe about the different methods of preventing bees from swarming, and especially by virtue of the construction of their habitation, allow me to say that I feel very positive that whoever makes anything such as is described in that letter, and puts bees into it, either in a barn or anywhere else, will not do so but once.

I knew a man once, who had a bee-hive in a closet in his house, the bees working in and out through the siding. The hive was a real good one, with modern surplus arrangement, and all that, and the year being a bounteous one, he got a fine lot of surplus honey. In a jocular way, he said that he thought the reason of the big yield was that every time the workers flew out, they looked back at the house, and supposed that they had the whole thing to fill, and waded in accordingly. This joke comes about as near scientific facts as does the building of big boxes with glass fronts, etc.

Bees are not as apt to swarm out of a great box, seven or eight times too big for a colony, as they are from a proper sized hive, but they are more apt to die in winter, and far more likely to become extinct from loss of the queen. The correspondent had better put the bees in a common hive, and keep them in the ordinary way, even if she never looks after the swarms at all, and let the swarms go to the woods. Even then she will have more money and more bees at the end of ten years.

The best and only really efficient non-swarming theory that has been proven to work in practice, is the one set forth years ago by Gen. D. A. Adair, of Kentucky, viz: Make one long, horizontal brood-chamber; fill it with about thirty Langstroth frames, and manipulate them so as to keep the brood-nest always in the rear end of the hive. Of course, the frames run crosswise of the hive, but the entrance must be in one end of the trough-like brood-chamber. Always keep some empty frames (not only empty of all brood and honey, but of all comb) in the front end of this long box, and not one colony in thirty will swarm, one year with another.

While such an arrangement as the above is far more practical than the one described in Kit Clover's letter, it is not good, and after having been tried by many skilled bee-keepers, it has all gone entirely out of use.

Dowagiac, Mich.

A Special Club Rate.

A Magazine of the choice literary character which the ILLUSTRATED HOME JOURNAL sustains, will add many pleasures to any "family circle." Its beautiful illustrations and interesting reading-matter will make it heartily welcomed at every "fireside."

We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for **$1.60**, if the order is received at this office by March 31, 1890—when this offer will end, the regular rate being $1.75.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Mar. 20.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Good Record in Wintering.

I put into the cellar 40 colonies of bees last November, and to-day I took them out, all alive and in good condition. Who can beat this record? C. S. HILL.

Freeport, Ills., March 13, 1890.

Very Warm Winter Weather.

The weather here last night was 2 degrees below zero, and this morning it is 8 degrees above. It has been very warm here all winter, and the bees flew every few days; the last time that they had a flight, they soiled up the outside of the hives the worst that I ever saw them do. The next day they flew again, then cleaned the hives out, and things looked better. Can any one tell what effect the warm winter will have on the wintering of bees out-of-doors? EDWIN HUTCHINSON.

East Avon, N. Y., March 7, 1890.

Bees Getting Short of Stores.

The winter throughout this portion of the State has been an open one—so much so that our bees have had a good flight several times since the beginning of the winter months. The bees are getting very short of honey, and quite a number of colonies have already starved throughout the county, from the fact that but little honey was obtained after August of last year; however, a good supply was obtained from white clover and the linden bloom. I had to feed up quite a number of late swarms, as no honey was obtained for winter use from the fall flowers. The AMERICAN BEE JOURNAL is still a welcome visitor on my desk. J. M. YOUNG.

Plattsmouth, Nebr., March 8, 1890.

Putting Bees in too Early.

Dr. Miller says in his reply to Mr. M. M. Baldridge's letter, on page 146, that he is "looking to see a report from those who have put in bees *too* early." Now I believe I am one of "those." On the way home from the Chicago Convention, last fall, in a conversation with Mr. D. A. Fuller and myself, the Doctor remarked that he intended putting his bees into the cellar immediately on getting home. Now, Dr. Miller has been, and still is, my "apostle" in bee-keeping, and, following his advice, I put my bees in as soon as possible—about Oct. 20. The weather continued warm, and the bees were very uneasy. The outside doors were kept open at night, still the bees kept on roaring, and at last I put in a ventilator, made of three-inch stove-pipe, reaching from the cellar directly over the bees, up through the floor, and connecting with the pipe from the stove in the room over the bee-cellar. There has been a constant draft through this pipe, but all to no purpose. With the exception of three or four days at a time, the bees have been uneasy all winter, and I shall consider myself very fortunate if half the colonies live to be put on the summer stands. The temperature has ranged from 42 to 51 degrees.

Here let me say that my experience (though I admit it is short—4 years) would indicate that bees will winter better at a temperature ranging from 35 to 40 degrees, than any higher. Two years ago they were wintered in a cellar where the mercury stood below 30 degrees for six weeks, and yet they came through in fine condition. As warm as this winter has been, I believe that the bees would have been much better off on the summer stands until Christmas; and I doubt if there are half a dozen prominent bee-keepers in the United States, who actually put their bees in before Nov. 1; if so, I would like to hear from them through the BEE JOURNAL.

S. H. HERRICK.

Rockford, Ills., March 5, 1890.

My Experience with Bees.

I started two years ago this spring with 40 colonies of bees, and I now have 180 in the cellar, which are wintering well so far. I had rented a farm two years, and last spring I bought 80 acres of land, and built a house, shop and bee-cellar, and improved a little on the place.

HENRY HURDLEBRINK.

Reno, Minn., March 11, 1890.

Cold Weather—Wintering Well.

We are now having the most protracted cold spell here that we have had during the winter, which has been mostly open, and no sleighing until now. There has now been about a week of fair sleighing, and the thermometer is below zero every 24 hours. Bees, so far as I know, are wintering in good condition; my own are the most quiet this winter of any I ever had in the cellar, and I think that all that were in good condition last fall, will winter without loss. There was one or two colonies that I transferred from trees in the woods, too late last fall to get in shape to winter, and I expect to lose them. Hereafter, I will make short work of such swarms found late in the fall. L. J. CLARK.

Wiscoy, Minn., March 7, 1890.

Invertible Brood-Frame.

Mr. W. C. Lyman reported a new brood-frame on page 163, and promised a trial the coming season and a report. Now I had invented the same frame, and had made a model of it for inspection and criticism of bee-keepers at a convention on March 8, at Boonville, Mo.; and I was somewhat chagrined, when I saw the report by Mr. Lyman. This frame, no doubt, is the out growth of former improvements given to bee-keepers that have been thoroughly tested. I will prophesy that this is the crowning invention in bee-keeping appliances, and will remain so for some time to come. Did I not know the disposition of people to hold tenaciously to such fixtures as they had become accustomed to, I would say that no more old-style brood-frames will be manufactured, and the stock on hand must be made over, or used for kindling fires. Notice this frame embodies the break-joint principle, and will do all that any honey-board could do, in preventing bridge-combs being tied to surplus fixtures, restraining queens, etc.; and I think that it is also possible to cut slots in the centre of the $1\frac{3}{8}$-inch bars so accurate as to require no perforated zinc whatever. These frames being wide, makes them more stable for moving about, and by making the short pieces that the invertible part is pivoted to, the same width as the top, it becomes as solid for transportation as could be desired. I also will test them the coming season and report, and hope that many will do the same. J. W. CLARK.

Clarksburg, Mo.

The Results of Last Season.

I commenced the season of 1889 with 100 colonies of Italian bees, increased them to 176, and secured 3,500 pounds of surplus honey. This is a very poor showing for that number of colonies, but the season was very unfavorable for the production of honey—the poorest that I ever experienced since I have been in the business. Last fall I placed 144 colonies in the cellar, and left 32 on the summer stands. They seem to be wintering very well, but I expect to lose some in the spring.

DANIEL WHITMER.

South Bend, Ind., March 10, 1890.

An Open Winter for Bees.

My bees are, to all appearances, wintering nicely. There never was a winter in all my experience, where the bees have been confined to their hives so little as they have this winter. There has not been a week during which they have not been able to fly more or less—rather more than less—and I think that less would be better.

B. T. BLEASDALE.

Cleveland, O., March 12, 1890.

Successful Wintering of Bees.

Bees are doing well in this locality. I winter them in the cellar, and have lost none so far. In fact, I have wintered from 7 to 40 colonies in the cellar every winter for the last nine years, and have never lost any save a few—4 or 5 weak ones, that were second or third swarms, and died for want of supplies. I generally put them in about the middle of November, and take them out about the middle of March or the first of April. This year the weather was so unusually warm, that I took them out on Feb. 28, as the cellar was damp, from having had a little water in it in the early part of the winter, and I was afraid that the combs would get moldy, as they did one winter several years ago, but I did not lose any bees by it, but it made them a great deal of work to clean the combs, and it made them late in swarming. Bees did fairly well here last year—mine averaged 35 pounds of comb honey in one-pound sections, and doubled in increase. I use the Salisbury hive—8x18x18 inches, inside measurement, with 12 movable frames, and tight bottom-board; I practice the tiering system, and sell my honey at home. I have made a few shipments to Chicago, but I find that it pays better to depend upon the home market.

J. D. MANDEVILLE, M. D.

Philo, Ills., March 7, 1890.

☞ Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

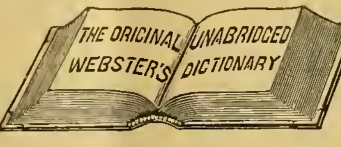
Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

WONDERFUL

Nearly every one is familiar with the name, but it has been estimated that only one in every 280 persons in the United States is fortunate enough to have access to the valuable information contained within the covers of the grandest work ever written by mortal man—WEBSTER'S UNABRIDGED



DICTIONARY. That this is an unfortunate state of affairs will be admitted by all, and it is due to the fact that no one save the rich could afford them.

The Dictionary is a necessity in every home, school and business-house. It fills a vacancy and furnishes knowledge which no 100 volumes of the choicest books could supply, and all, young or old, educated or ignorant, rich or poor, should have it within reach, and refer to its contents every day in the year.

The "Loomis Re-print" contains all the matter as compiled and arranged by our esteemed and honored author and statesman—Noah Webster. About 40 years of his life was devoted to this great work; and when we consider the fact that this book contains about 100,000 words with their correct spelling, derivation and definition, we will appreciate that these years must have been well spent.

Some idea of the magnitude of this book may be gained from the fact that it contains over 440 cubic inches of paper, and has about 300,000 square inches of printed surface. This is a cheap, re-print edition without illustrations.

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Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

HONEY AND BEESWAX MARKET.

MILWAUKEE, March 13.—The demand for honey is very good, and the supply is fair. We quote: White 1-lbs., 12@13c—and if absolutely perfect, sometimes 14c.; choice, white 2-lbs., 12@12½c.; dark 1-lbs., 10@11c.; old 1-lbs., 8@9c. Extracted, white, in barrels and half-barrels, 7½@8c.; in pails and tin, 8@8½c.; dark, in barrels and half-barrels, 6@6½c. Beeswax, 22@25c.
A. V. BISHOP, 142 W. Water St.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.
M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, March 6.—The demand for honey is improving a little, but it is no better in prices. White 1-lbs., 11@12c.; white 2-lbs.; 10@11c.; fall 1-lbs., 9@10c.; 2-lbs., 8@9c. Extracted, white, 7c.; dark, 5@6c. Beeswax, 22c.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Mar. 13.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

CHICAGO, March 6.—Honey is selling quite well in a small way, at 12@13c. for white 1-lbs., and 10c. for 2-lbs.; dark is slow at 8@10c. Receipts are heavier than usual for this season of the year, but all is called for as fast as it arrives. Extracted is dull at 6@8c. Beeswax, 25c.
R. A. BURNETT, 161 S. Water St.

BOSTON, March 11.—Fancy 1-lbs., 16c. Anything off-grade sells considerably below 16c. Two-lbs., 15c., for the best quality. Extracted, 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON.
Corner Freeman & Central Aves.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cents. For sale at this office.

Advertisements.

READY TO SHIP! Italian Queens—Tested, $2.00; Untested, $1.00—3 for $2.75. Ready April 1st. Nuclei cheap. Send for Price-List. COLWICK & COLWICK, Norse, Bosque Co., Texas. 12A6t

JAPANESE BUCKWHEAT
80 cts. per bushel. New bags thrown in.
E. C. Eaglesfield, Berlin, Wis.
12A1t

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The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

Money for All

—SELLING OUR—

FRUIT TREES, ROSES & ORNAMENTALS,

At honest Prices. We will take Bees and Supplies in payment: Catalogue free.

J. B. ALEXANDER & CO.,
Golden Rule Nurseries,
12A2t Hartford City, Ind.

Mention the American Bee Journal.

FOR SALE! **Italian Bees and Queens,** in small and large lots, at a VERY LOW PRICE. Address, OTTO KLEINOW, No. 150 Military Ave., Detroit, Mich. 12Atf

Mention the American Bee Journal.

WANT TO EXCHANGE

Apiarian Supplies for 500 Empty Bee-Combs. Will pay part cash. Address,
12A1t **J. B. MURRAY**, ADA, OHIO.

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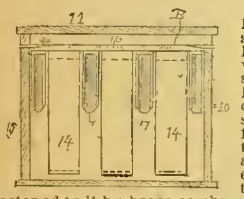

By the use of my IMPROVED SPACER, an ordinary Hanging Frame Hive is converted into a Reversible, or Movable Hive. A Hive is quickly and correctly spaced, and the frames are held in their proper position and will not be lifted when removing the cover if they are fastened to it by brace-combs. A contracted hive is made movable or invertible. In adopting this, it requires no change in a hanging-frame hive. Price of Brood-Chamber and 8 Frames, $1.50. One Hive and one doz. extra Spacers, $4.00. In ordering, state what frames you use and give the width of your hive, inside. J. B. WILCOX, Manistee, Mich.
12E4t

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A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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WE have a few of these Hives, complete, for sale at **$3.00** each—*to close them out.* We cannot fill any orders for them in the flat, nor these nailed ones, after our present stock is exhausted. The few we have are nailed and painted. Order promptly. Address,

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Hamilton, Hancock Co., Ills.

For Comb Foundation Mills,

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W. C. PELHAM, Maysville, Ky.
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SOMETHING NEW,

Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,
6Etf JNO. NEBEL & SON, High Hill, Mo.

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H. G. FRAME, North Manchester, Ind., breeder of **Italian and Carniolan Queens.** Bees by the pound and Nucleus. Price-List FREE. Reference—First National Bank. 10Etf

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WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship. **Italian Queens and Bees** at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

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In 25-Pound Boxes.

WE CAN now furnish the **Van Deusen** EXTRA-THIN Flat-Bottom FOUNDATION put up in 25-lb. Boxes, in sheets 16¼x28 inches, at **$12.50** per box. **12 ft.** to the lb.

☞ The above is a **special offer,** and is a **Bargain** to all who can use that quantity.

All orders for any other quantity than exactly 25 lbs. (or its multiple) will be filled at the regular price—**60 cents** per lb.

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Send 75 Cents for my Book, entitled—"A Year among the Bees;"—114 pages, cloth bound. Address,
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20Atf MARENGO, ILLS.

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

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☞ To avoid mistakes, the name of the shipper should always be on each package.

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By Mail, and the AMERICAN APICULTURIST one year for $1.50. Circular and Sample Copies free. Address,

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CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. March 29, 1890. No. 13.

EDITORIAL BUZZINGS.

"If the weather is fair,"
Said the butterfly, jauntily and free,
"If the weather is fair,
I'll go dance in the meadow there!"
"And I," said the prudent bee,
"Will be early at work, you will see—
If the weather is fair!"

◆

The Rev. W. F. Clarke, President of the Ontario Bee-Keepers' Association, gave us a call last week. He is troubled with sciatica, and has to use a cane and a crutch. We had a pleasant visit with him, and hope he will soon recover his usual health. Our readers will soon have the pleasure of seeing articles from his pen again; other duties which prevented such for several months, have been so arranged as to allow him to resume his pen for the AMERICAN BEE JOURNAL.

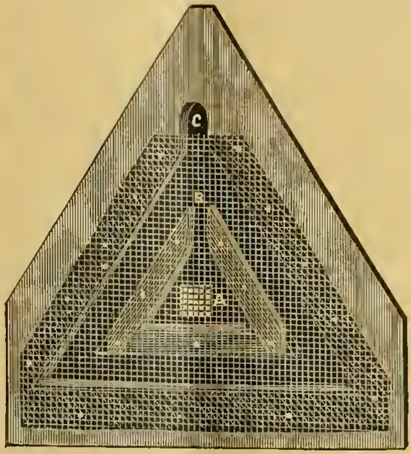
◆

Walter Harmer is pretty well-known as the ingenious inventor of penny packages for honey. His latest invention in that line is a small cone 2½ inches high, 1½ inches at the base, and running to a peak. The "wrapper" is thin comb foundation, which is filled with candied honey, making an enticing sweet-meat to be sold for 2 cents at fairs or candy stores. It can be taken by the fingers and eaten like a piece of candy. It is cheap, enticing and delicious.

◆

L. A. Aspinwall was elected President of the corporation of Three Rivers, Mich., by 217 majority. We congratulate Mr. A. upon his popularity at home. Bee-keepers will have nothing to complain of in that town; for if President Aspinwall does not enlighten the fossils, it will be a hopeless task for any one else.

Another Bee-Escape.—The engraving shows the latest Bee-Escape as devised by Mr. C. Russell, of Conesville, N. Y. An inner triangle surrounds the exit-hole, (A), presenting a passage-way (B) to the bees which enter the Escape at (C). The engraving shows the underside of the Escape.



We have received another sample of a Bee-Escape from Mr. Reese, of Kentucky, of which we will present an engraving with a descriptive article next week.

◆

Bogus Extracted Honey.—We have received the following from Mr. T. H. Kloer, of Terre Haute, Ind., dated March 19, 1890:

> I have sent to the BEE JOURNAL office a small jar labeled, "Pure Clover Honey; Albert Botsford Co., Chicago." The jars are in two sizes, the one which I sent being the smaller size. The article has been sold extensively in this city during the past winter, interfering considerably with the sale of extracted honey. It has been kept by most grocers. Will you be so kind as to give me your valued opinion as to the contents of the jar—both the liquid and solid portions of it? Of course, I have *my* opinion, and have expressed it freely; but an expression from you, might convey conviction in many places, where I alone would fail. I act only for the good of the fraternity. Please reply in the AMERICAN BEE JOURNAL. T. H. KLOER.

Upon receipt of the jar referred to in the above letter, we immediately investigated the matter. We found that the office of the "Albert Botsford Co." was located in a dark and dingy basement of a building on one of the worst streets of this city. At the time we called, there were several young girls at work bottling, or canning, cucumber pickles, in a room just opposite the main office. We saw Mr. Botsford, and enquired in regard to the "honey" in jars that we understood he had for sale. Going to the canning room, he told one of the girls to get a "sample of that honey," which she succeeded in finding after some delay.

We took the sample (which was a half-pint glass jar full of a dark liquid with a piece of honey-comb in it), held it up to the light, and then said, "Is this *pure* honey?" "Oh, no," replied Mr. Botsford; "it is a mixture of *glucose* and honey—*about* one-third glucose and two-thirds honey."

We should say that the "stuff" is mainly a poor article of glucose, with a little buckwheat honey to flavor it; the small crust which was candied showing the amount of honey—the liquid being poor glucose.

"Do you sell much of it?" we ventured. "Oh, yes," he replied. He then said that a man in Indiana (at Terre Haute), who had been fighting this article of "honey" all winter, had just written him a letter asking for prices, and stating that he wanted to keep it for sale; that a great deal of it was used there; and that pure honey was too dear. "I'll read you the letter," he finally said. He did so, and we were surprised to learn that it was from Mr. Kloer, himself. Of course we are well aware that it was a *decoy* letter.

Mr. Botsford informed us that he could sell the half-pint jars of the "honey" to us for $1.00 per dozen, and that it should retail for 15 cents per jar; that the demand was increasing, etc. "How any sane person would use such miserable stuff, when the pure article can be had at a less price, is beyond our comprehension," we thought!

Bee-keepers should learn a valuable lesson from this. What they should do is, to teach their neighbors the difference between such villainous compounds and the genuine sweet as gathered and stored by the bees. It should be the aim of each bee-keeper to educate every family in his neighborhood, or township, so that they will accept nothing in the line of honey, but the pure and unadulterated article.

This can be accomplished in no other way so well as by distributing the Honey Almanacs in every locality. Let your motto be, "An Almanac in every household, and honey on every table." When this is done, there will be no more complaints about low prices and no demand for the best and healthiest article of food and medicine in existence to-day. (See prices of the Almanacs on page 224).

◆

☞ Mr. C. F. Muth has sent us one of his shipping-crates to hold 12 one-pound sections. It is simple, neat and substantial. Crates to hold only one tier of section are the most desirable; those holding two tiers of sections are often the cause of much trouble when carelessly handled. A good piece of manilla paper between the tiers is essential in a shipping-crate which holds more than one tier of sections, to protect the lower sections from leakage above.

◆

☞ A correspondent of the new State of Washington writes thus on March 10, 1890:

> We have snow, showers and sunshine much after the Michigan April to-day, with the exception that we do not have much wind. As usual, the snow melts as it falls, and we have mud. Robins are about, but the song of the frog is hushed in the cool air and the "beautiful snow."

Pause and Think.

Our trials we could soften,
  If we'd only pause and think.
Tears would not flow so often,
  If we'd only pause and think.
Our skies would all be brighter,
And our burdens would be lighter,
Our deeds would all be whiter
  If we'd only pause and think.

We would not proceed so blindly
  If we'd only pause and think.
We would never speak unkindly
  If we'd only pause and think.
We would cease unrest to borrow,
Darkly clouding each to-morrow,
We would banish worlds of sorrow
  If we'd only pause and think.—*Sel.*

GLEAMS OF NEWS.

Awards at the Late Paris Exposition.—Concerning these Awards, we would refer our readers to a circular issued by the United States Department of Agriculture, and dated at Washington, D. C., March 10, 1890, which reads as follows:

Frequent inquiries are being received at this Department by those who received awards at the late Paris Exposition, as to how to go to work to obtain their awards, when they can be obtained, etc. All that we have been able hitherto to say in replying to these inquiries was, that, first, according to a decision of the authorities, no medals (except perhaps those of bronze) will be struck, but diplomas indicating the kind of award will be issued, and it will devolve upon the awardee to pay for the striking of the medal if he wishes one; second, judging from experience with preceding Expositions, it will be many months before the diplomas are distributed, and they will be distributed, when ready, through the State Department.

The *Journal des Debats* of Jan. 10 last, contained official information which will be interesting in this connection. It announces that: the copies of the diplomas intended for exhibitors who received awards will not be delivered before March 1, though by the terms of contract, they should have been delivered by Jan. 1. The delay is due to an accident which happened to the engraver. It is further announced that, "The diplomas will in any event be entirely distributed, as at present advised, by Aug. 1, 1890, by which time all of the bronze medals which are to accompany diplomas, indicating recompenses above the grade of honorable mention, will also be distributed."

Further information as to details of cost and methods of obtaining the higher medals awarded, will no doubt be sent out by Commissioner General Franklin as soon as obtained.

In this connection I take pleasure in stating that, in addition to awards to American exhibitors in the Agricultural Exhibit there was received, some time since, a supplementary list of awards to collaborators who helped in their exhibit, including the following not mentioned in the original list sent out last November.

CLASS 76.—USEFUL INSECTS.

SILVER MEDALS.

N. W. McLain, St. Anthony's Park, Minn.
Philip Walker, Washington, D. C.

BRONZE MEDALS.

A. J. Cook, Lansing, Mich.
G. W. Demaree, Christiansburg, Ky.
W. T. Falconer, Jamestown, N. Y.
G. L. Tinker, New Philadelphia, O.
A. C. Tyrrel, Madison, Nebr.
James Heddon, Dowagiac, Mich.
C. F. Muth & Son, Cincinnati, O.
Thomas G. Newman & Son, Chicago, Ills.
A. I. Root, Medina, O.
J. Van Deusen & Sons, Sprout Brook, N. Y.

A summary of the awards in the Agricultural Exhibit shows the following results: Grand prizes, 7; gold medals, 40; silver medals, 68; bronze medals, 54; honorable mentions, 39; and a comparison with the American awards in the same classes at previous Paris Expositions, or with those in other classes in 1889, must needs be gratifying to all concerned in the agricultural exhibit at the late Exposition.

J. M. Rusk, *Sec.*

We can see no reason for the long delays in supplying the medals, etc. In August, 1879, we were awarded a silver medal for an exhibit at Prague, Austria, and though eleven years have nearly elapsed the medal has not been received. We need a reform in the management of such exhibitions. Let the management of the Columbian World's Fair in 1892, set an example to the world in this matter, by prompt delivery of prizes awarded.

La Grippe.—The epidemic that raged all winter throughout Europe and America is a disease that makes its visits only about once in a century in an epidemic form.

It is claimed by the medical profession that of itself it is not especially dangerous, but is apt to fasten its fangs upon weak constitutions, and especially upon those who are subject to pulmonary troubles, or any other constitutional weakness. Those who died, scarcely without an exception succumbed, not to the influenza, but by the aggravation of some previously existing trouble by the influenza.

It is very likely that the mild winter may have something to do with it. The medical profession both of Europe and America seems inclined to the theory that the disease is due to a microbe that fills the atmosphere, and enters the system by inhalation. If this be true, the mild winter may have given rise to the creation of the microbe. It is singular, however, that the disease should come to us from Russia, where the winters are very rigorous—*Ex.*

☞ An exchange contains the following "fishy" paragraph:

From the Skies.—In various parts of Laurens county, S. C., an unusually quantity of "honey-dew" is reported to have fallen; and in some cases the phenomenon of a shower of sweet water from a cloudless sky caused not a little alarm.

"Sweet water from a cloudless sky" is drawing upon the imagination considerably.

☞ Clubs for anything in our Premium List may be for either of our Journals, or for any number of either or both of them.

Fractional Currency.—What is needed by those who live in the country, more than any other convenience, is paper fractional currency issued by the United States Government. The law introduced last year authorizing it was buried in a "pigeon-hole" by a committee. Let it now be resurrected and passed. The following from an exchange is to the point:

The ten million people who live in large cities, most Congress members among them, have no need of buying through the mails. They can go to a store near by and procure any article they may desire. But the fifty odd millions of our population living in the country and country towns are differently situated. Where are they going to get many of the conveniences and necessities of rural life—such as books, papers, seeds, plants, roots, flowers, insecticides, horticultural implements, and a host of other things, not on sale in their immediate neighborhood—if not by purchase from a distance?

These fifty odd million people must make remittances by mail, and it is not always convenient to do this by postal note or money orders; hence the fifty odd million of people thus situated should be supplied with money suited to their needs. Postage stamps were never designed for currency and with their small size and sticky backs, and not being legal tender, are in no way suited for that purpose. Yet for want of something better, millions of dollars worth of stamps are thus in circulation—a dread to the sender, and a poor apology for legal tender money in the hands of seedsmen, nurserymen and other shippers of small merchandise, as well as of publishers.

This urgent need can be supplied by the re-issue of a few million dollars in fractional currency.

New Catalogues and Price-Lists for 1890 are received from—

Wm. H. Bright, Mazeppa, Minn.—20 pages—Bee-Keepers' Supplies.

J. T. Wilson, Little Hickman, Ky.—1 page—Italian Queens.

C. F. Muth & Son, Cincinnati, Ohio—32 pages—Bee-Keepers' Supplies.

F. A. Lockhart & Co., Patten's Mills, N. Y.—8 pages—Carniolan Bees and Queens.

Thos. S. Wallace, Clayton, Ills.—4 pages—Bees and Queens.

Smith & Smith, Kenton, Ohio.—26 pages—Implements in Bee-Culture.

Gillett & Horsford, Southwick, Mass.—32 pages—Wild Flowers, Shrubs, Trees and Vines.

Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.
D. A. Fuller, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
Benj. E. Rice, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texss, on May 7 and 8, 1890. All interested are invited.
J. N. Hunter, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. Rouse, *Sec.*

QUERIES REPLIES.

Do Bees Change the Consistency of Nectar on the Wing?

Written for the American Bee Journal

Query 697.—Do bees increase the consistency of nectar voluntarily, while on the wing homeward from their pasturage? or is the fine spray, which it is inferred they eject, a regurgitation caused by excessive exertion while flying with an over-laden honey-sac?—Maine.

I think not.—G. L. Tinker.

I do not know.—R. L. Taylor.

I do not know.—C. H. Dibbern.

I do not know.—J. M. Hambaugh.

I give it up before I try.—A. B. Mason.

I never saw the "fine spray" spoken of.—G. M. Doolittle.

I know too little to venture an opinion. I respectfully refer it to the "digested-nectarists."—Eugene Secor.

Do they eject a fine spray in their homeward flight? I think not.—Mrs. L. Harrison.

I do not know. The only way to find out, would be to catch the spray, and ascertain whether it is water or nectar.—M. Mahin.

I rather think that they increase the consistency *voluntarily*, but I doubt about any such "regurgitation" as you speak of.—C. C. Miller.

This question, I think, is beyond the power of human ken to answer. It is the quintessence of infinitesimalism.—J. P. H. Brown.

I doubt if the honey is thickened. It is in the honey-stomach, undergoing digestion, or the change into honey.—A. J. Cook.

I know nothing positive in regard to it. Do you really mean "regurgitation?" I think that "evacuation" would come nearer to it.—H. D. Cutting.

I think not. The ejections sometimes seen (when bees are feeding on thin syrup) in their transit from the feeding-place to the hive, is a discharge from the lower bowel—not from the honey-sac. No doubt it is the result of mechanical pressure, as you suggest.—G. W. Demaree.

I do not know. How should anybody know? What difference does it make if they do? If they get their little "pails" so full that they cannot be jostled without spilling, we must get larger ones for them.—J. M. Shuck.

In our opinion, the fine spray is a discharge from the abdomen of the feces, of the watery honey which they have been consuming. We not believe that the honey which they have gathered, ripens in their stomach; nor do we believe that they can separate the honey in the honey-sac from the water, and regurgitate the latter.—Dadant & Son.

Bees gather honey in obedience to the laws of Nature, and that is about all we know about it. There are many theories afloat in regard to the changes that do, or do not, take place in the stomachs of the bees; but who is right, or who is wrong, is still a mooted question. I do not think, however, that the question throws any light at all.—J. E. Pond.

I do not know. One of the main reasons why I do not know, is because I do not care. The principal reason why I do not care, is because I follow bee-keeping, and spend my time and energies in observing and experimenting for the purpose of getting money out of the business. My wife and children require new dresses and shoes, and sometimes I want a "new gown" myself; that is what I follow bee-keeping for, and not for idle curiosity. I believe that I know more about the practical, useful things connected with bee-keeping for the simple reason that I never bother my brain about the question of whether the queen faces north or south, or looks into the cell just before she backs in it to lay an egg. It does not make an difference with the amount of surplus honey I am to get, and the least amount of labor I will need to expend to get it.—James Heddon.

Management to Secure Honey Instead of Swarms.

Written for the American Bee Journal

Query 696.—1. Would it be practical, after a colony has become strong, and about ready to swarm, or at the time when the apiarist desires his bees to be gathering honey instead of rearing brood, to shut the queen in one side of the hive, on one or two combs, by the use of a piece of perforated zinc as long as the hive (inside measurement), and wide enough to bend over the top of the one or two combs? 2. How would it affect swarming?—Iowa.

1. I do not know.—H. D. Cutting.

1 and 2. Try it and see.—A. B. Mason.

1. I do not think that you would like it. 2. It might hasten it.—C. C. Miller.

1. I think not. 2. I think that they would very likely swarm.—A. J. Cook.

Some recommend a similar plan. I prefer to let the bees swarm.—G. M. Doolittle.

1. While I have no practical knowledge on the subject, I doubt if it would pay.—Eugene Secor.

1. I do not think that it would be practicable. 2. Try it and report.—C. H. Dibbern.

1. It might be practicable, but it would not be practical. 2. The bees would build queen-cells and swarm.—M. Mahin

The plan you suggest has often been tried, and I think that it has as often been found a failure. 2. It will not prevent swarming.—G. W. Demaree.

1. I do not think that the plan is practical or advisable. 2. It would not prevent swarming.—G. L. Tinker.

It would be perfectly practical, but I do not think that it would be advisable to do so. In many cases it would lead to building queen-cells and swarming.—J. P. H. Brown.

1. It is not practical. Keep the brood-combs in proper condition, and give the queen the liberty of her house. 2. It would not prevent swarming.—J. M. Shuck.

1. I do not think that it is practical or advisable. 2. If the colony had "become strong and about ready to swarm," of course they would have facilities for rearing a new queen, or several of them.—Mrs. L. Harrison.

1. No. 2. It would be likely to lead to an irregular sort of after-swarming, as most of the colonies would probably rear a lot of young queens, even if they would not otherwise have done so.—R. L. Taylor.

1. It would not work in my locality, where I want bees in abundance till frost. I very much doubt if your plan can be made practical in any locality. 2. You may prevent swarming to some extent by this method.—J. M. Hambaugh.

1. It might; but why not get Doolittle's "Scientific Queen-Rearing," and follow that? The method you suggest, is old, and has not been found of value, as compared with many others. 2. Much would depend. It might set the bees in a rage, and work badly.—J. E. Pond.

1. No, sir; it is not practical. The labor of performance and the results flowing from it, will cause any person to abandon it if he once begins it. 2. It will not prevent the queen getting out in most cases. After a time they will have the young queens hatched out on the other side of the zinc. Then they will swarm with a young queen.—James Heddon.

The April Number of "Frank Leslie's Popular Monthly" contains fully a dozen elaborately illustrated articles, any one of which is worth buying the magazine for. "The Senate and its Leaders" is discussed in bright, gossipy style by Frederick Daniel, and nearly a score of portraits and views accompany the text. Wm. Hosea Ballou describes the Tennessee Blue-grass region and its thoroughbred horses, together with the historic homes of Presidents Polk and Andrew Jackson. The wonders of Edison's perfected phonograph and graphophone are brilliantly set forth by Arthur V. Abbott, in an article entitled "A Voice from the Past," with the best pictures that have ever been published in connection with this subject. The short stories and poems of the number are by favorite magazine writers, including Lucy Hooper, Ella Wheeler Wilcox, and others.

☞ "Insect Life" for March, published by the Division of Entomology of the United States Department of Agriculture, is now ready for distribution. It contains, besides various special and general notes and extracts from the correspondence of the Division, an article on "Cockroaches," being a continuation of Prof. Riley's series of articles on the "Insect Pests of the Household;" an account of two new spider-egg parasites, by Mr. Howard; a translation of a French article on the parasitic castration of an insect by Hymenopterous and Dipterous larvæ; an account of a poisonous spider in Madagascar; and another installment of Lord Walsingham's Revision of Chambers' Index of the North American Tineina, a group of small moths which are universally injurious either to forest trees and other vegetation, or our household goods.

Why Advertise in the American Bee Journal? Here are some good reasons:

1. Because it has a large and influential circulation in every State and Territory, Canada, and other foreign countries.

2. Because it is well-printed, and an advertisement in it appears neat and attractive, and invites a reading.

3. Because it reaches just the class of persons desired—professional men, lawyers, doctors, and the best rural population.

4. The rates are low and the returns from advertisements are satisfactory.

We have received hundreds of unsolicited commendations of the Bee Journal as an advertising medium, but have no room to give them here.

March.

Though winter waits reluctant
To yield the rule to March,
The sun with step exultant
Walks high through heaven's arch,
Till day and night
Bring new delight,
By equal hours in March.

At rest in winter's rigor
The life-tide wends its way,
Ascending with new vigor,
Up through the branches gray,
From roots below
'Neath melting snow,
Predicting leaves of May.
—*Clara Hapgood Nash.*

CORRESPONDENCE.

BROOD-COMBS.

Their Proper Thickness—Honey Plants on Farm-Land.

Written for the American Bee Journal

BY DR. C. C. MILLER.

On page 141, Mr. J. E. Pond advises top-bars ⅞ of an inch thick, spaced bee-space apart ; and elsewhere he advises shaving down any combs which are more than ⅞ of an inch thick. I have not been very successful in attempting to carry out this plan, although some fault may have been in me, but it seems to me that some things are not taken fully into account.

Mr. Pond makes the very strong statement that "the whole matter of bee-keeping work is reduced to a minimum, all that is required being to start with sheets of comb just ⅞ of an inch thick, and so spaced that they cannot be built any deeper." Now it is a fact not always, if indeed often, taken into account, that with age the thickness of comb increases. For another purpose I once made investigation as to thickness of comb, and while I found new comb ⅞ of an inch thick, I found some old comb fully an inch in thickness. I have some doubt if Mr. Quinby would have made the tin combs, of which Mr. Pond speaks, an inch thick, if he had not found natural comb of that thickness. The explanation of the increased thickness is easy. The continued rearing of bees in the worker-cells—and, by the way, worker-comb alone is to be considered—leaves deposits of cocoons, mainly at the *bottom* of the cells, so that old comb measuring an inch in thickness, will be found to have a septum ⅛ of an inch in thickness.

Now suppose we "start with sheets of comb just ⅞ of an inch thick, and so spaced that they cannot be built any deeper." What will be the result when the septum increases in thickness? The combs are "so spaced that they cannot be built any deeper ;" and my observation has been, that in such case the bees will gnaw down part of the cells in one comb, in order to deepen the cells of the opposite comb, and, as a consequence, no brood will be reared in the cells which have been gnawed down. If bees would empty out the cocoons, the same thickness might be maintained ; but do they ever do this, without first cutting down the entire cell walls ?

I would give something to know just what is the best distance to space top-bars from center to center. Some say as much as 1½ inches—perhaps a majority say about 1⅜ inches, and a very few come down to 1¼ inches, while Mr. Pond stands alone, I think, in recommending 1 3-16 inches. This is on the supposition that by "bee-space" he means the commonly accepted 5-16 of an inch.

FARM LAND FOR HONEY ALONE.

Will it pay to occupy farm land for honey alone ? While I have doubts on the subject, I would not utterly discourage experiments in that direction. I think it just possible that it might be profitable to occupy some land entirely with melilot. It depends upon the value of the land, and the amount of honey obtained in excess of what would be got without the melilot.

The answer to the problem would be comparatively easy, if we knew even approximately the amount of honey an acre of melilot yields in a season. Do we know anything about it ? Can any one prove that it is more than one pound per acre in a season ? Can any one prove that it is less than 200 ?

On page 147, Mr. S. W. Chambers, in a very sensible article, says, "The bee-keeper could not calculate on more than 10 pounds of honey per acre from honey-producing plants." If he means, as likely he does, the average "over thousands of acres," I think that he is right. If he means an acre solely occupied with honey-plants, he is putting it very low.

Mr. Quinby—if I remember rightly—estimated that an acre of buckwheat yields 25 pounds of honey per day, and I should think that would make at least 200 pounds per season.

Mr. Chambers says : "A man must expect at least $15 per acre for the use of his land." I think that he hardly means just that. Does he not mean for land and labor ? In many places the use of land can be had for $3 per acre, or less. Now if such land is occupied with melilot, and the melilot needs no cultivation, how much honey must be gotten to make it profitable ? If it gives an *additional* yield, then little or nothing need be counted for the expense of harvesting, for nearly the same work must be done in a season for a small as a large crop. So we may apply on the rent very nearly every pound of honey that we get *more* than we would get without the melilot.

If the honey is worth 10 cents per pound more than the labor it requires, then to pay $3, the acre must yield 30 pounds in a season. Mind you, it must not merely produce 30 pounds in a season—it might do that without any profit whatever, if the melilot should yield when bees have all they can do on the other plants ; but it must increase my crop at the rate of 30 pounds per acre. I must confess that it looks to me that it might easily do so in some years, and in some places. Can any one tell us anything definitely about it ?

Marengo, Ills.

SHIPPING-CRATES.

Importance of Using Small Crates for Comb Honey.

Written for the American Bee Journal

BY CHAS. F. MUTH & SON.

Shipping-crates for comb honey are a very important item for the bee-keeper as well as the dealer. The safe arrival of the comb honey depends principally on the shipping-crates; and, next to the quality of the honey, it is the crate that makes the sale. We had very many shipments of comb honey last season, and, as in previous years, there were a variety of different sized crates. We found, invariably, that the smallest crates were the safest for transportation, and the first sold.

If it was not for the mutual interests of the shipper and consignee, the disappointment, and, often, the unpleasant feeling created by the arrival of a lot of comb honey in bad condition, should be cause enough to throw aside every crate unfit for shipment. As in previous seasons, this winter we had a number of large crates containing 48 one-pound sections, and even 48 two-pound sections, also one of 45 sections —60 pounds net—of comb honey in a crate. It is too much. A heavy crate is invariably set down heavy, and a jar to one side seems to break a whole row of combs. Crates holding 24 sections are a great deal better, but they are also too large.

By far the most practical, the safest in transit, the most salable, and the cheapest of all shipping-crates, are those containing 12 one-pound sections. We shall hereafter recommend only such to be used by our friends and shippers. As a great many lots of comb honey pass through our hands, our chance to become acquainted with all kinds of packages is second to none, and our judgment, as to the best package, ought to be competent.

During the present winter, we had among perhaps a dozen, only one shipment of comb honey having 12 sections in a crate, which arrived in bad condition, while almost every other shipment in larger crates arrived more or less damaged. The damage in those small crates was not great, and could easily be seen, the broken combs taken out and replaced by sound ones from another crate. But no one unacquainted with it, can appreciate the job of overhauling a large lot of comb honey in large shipping-crates. One is at a loss to know what to do with the broken combs. So, it is our candid and well-meant advice, that the large shipping-case—"must go."

[This is excellent advice, and should be heeded by all who ship honey to large markets. Small shipping-crates holding 12 combs are large enough for anything. They can be transported more safely, and sell more readily.—Ed.]

* * *

SWARM-HIVERS.

Suggestions in Regard to Self-Hiving Arrangements.

Written for the American Bee Journal

BY G. M. ALVES.

Since self-swarming devices are now so much occupying the attention of bee-keepers, I have two plans to suggest, neither of which would infringe, in my opinion, those upon which patents are now said to be pending. My first suggestion is as follows:

Make of wood a channel—say 3 inches long, and the same width as of the hives used. Let the ends be open, and the sides made of solid wood—say one inch high. Let the top be formed of three slats ⅞ of an inch wide, which when fastened on the side pieces to form the top, would leave two openings at the top 3-16 of an inch wide. We thus have a wooden channel one inch high by three inches long, by the width of the hives used.

Now, at the proper time, put one end of this channel against the front of a hive, and against the front end of the channel place the back of a new hive; we thus have the new hive immediately in front of the old one, with a space of 3 inches between, filled by the channel. The sides of the new hive throughout their length, should rest upon pieces about one inch high, and the front of the new hive should have its entrance (which as now conditioned should be about 1⅜ inches high) covered with wire-netting. Have I ever tried the plan? No. Do I think it will work? Well, I believe it will; and, in any event, I have as much faith in it as those heretofore reported. It might sometimes work all right, and at other times it might not. We can only tell by experiments repeatedly made. One swallow does not make a summer.

The 3-16 inch openings in the top of the channel are large enough to readily admit loaded workers, and although the queen might pass through them, yet in the excitement and pell-mell of the swarming act, she and the large majority of her followers would, in all probability, take the most open route, and follow the greatest light—hence they would in all probability enter the new hive. It might be better instead of the wire netting, to cover the entrance of the new hive with queen-excluding zinc.

My other suggestion is this: Hang up about the bee-yard, nail-kegs or light boxes about 7 or 8 inches square, and about 20 inches deep, without bottoms. To these attach at the bottoms, by means of short cords, anything resembling a small swarm of bees, such as can be made from a piece of an old felt hat. A swarm will not always, but frequently it will, cluster on these, from which they will crawl up to the keg or box. They may then be taken and emptied in front of the hive intended for them.

In conclusion, I wish to say a word to beginners who desire to keep bees for profit, and that is this: Let all novel and untried devices and plans severely alone, which require expense and change of the hives and fixtures that you now use. Stick to those things which the continued experiences of others have proved to be valuable.

There is no greater delusion, than to think that because a thing is new, therefore it is an improvement. Out of the million and one ideas and devices which have appeared before the bee-keeping world, comb foundation, movable-combs and honey-sections, seem to be about the only things which have come to stay. Undoubtedly radical experiments are well in bee-keeping, as in other things, but they almost always are costly, and had best be confined to the few.

As a rule, improvements, when *real*, do not come easily—they usually require such an expenditure of time and money to make them practicable, and to introduce them to the public, that the time and money expended, if put in conservative channels, would generally prove more remunerative.

Henderson, Ky.

BEE-HIVES.

The Small Hives vs. Large Hives—Which?

Written for the American Bee Journal

BY G. M. DOOLITTLE.

In considering this subject of small *vs.* large hives, there are some things which are very essential, looking to the profit to be derived from the apiary, which, as far as I have seen, the advocates of large hives fail to mention. The advocates of these large hives base nearly all their supposed superiority of such hives on the principle that the larger the hive, the more bees there will be reared, and the more bees there are reared, the more honey the apiarist will have in the fall. Now, did we have one continuous yield of honey from the beginning of May to the end of October, this reasoning would be very nearly correct; and I here wish to say, that for those who are so lucky as to be situated in such a locality, this article will have no special interest.

But it so happens that 99 out of every 100 are not blest with a continuous yield of honey, and, in the majority of cases, the flowers of one plant or tree give the main honey crop of the season; hence at all other times of the year, except when this plant or tree is in blossom, the bees only get, from nothing (along the line of nectar) up to just enough to keep brood-rearing going on nicely. In all such localities as the last named, from my stand-point, it is impossible to secure the best results from our bees while using a large hive, and working for the production comb honey.

If bees sold for the almost fabulous prices at which they used to, the large hives might be profitable; but at the present prices, the *bees themselves* have no value in the fall of the year, as they will not sell for more in the spring than the cost of the hives, value of the combs, and stores consumed, allowing such stores to have been placed in a marketable shape the previous summer. For this reason, we are obliged to look at the matter from a honey stand-point.

The first reason why the large hive is not so good as the small one, in all ordinary locations, lies in the fact that the small hive gives greater warmth; or, in other words, allows of a better economizing of the heat of the cluster. Hence we can secure more bees early in the season, in time to take advantage of the white clover honey crop, with the small hive, as this crop comes too early for the bees to build up of their own accord, to work in that harvest to the best advantage.

The second reason—and the one that is at the "root of the matter"—regarding the greatest possible success in our pursuit, lies in the fact that, with the large hive, we must always rear a host of bees which must of necessity be only consumers. It must be always borne in mind, that each individual bee represents consumption of so much honey, a part of which is fed to it in the larval state, and the other part is consumed by the bee itself, after it reaches maturity.

Now, with the large hive, owing to the poor economy of heat, the bees do not begin breeding rapidly, nor can they be made to do so, until we are nearing the honey harvest, when they begin brood-rearing to an extent greater than it is possible for them to do in the small hive, owing to the walls contracting the egg-laying powers of the queen with the small one. This great extent of brood in the large hive, at this time, requires a large amount of honey to feed it, and as the days go by, the amount of brood is rapidly increased, until it ofttimes takes nearly all the honey the workers reared previously can gather from the fields during the first half of the harvest to supply the wants of this host of bees in the larval form. In turn, these bees hatch at near the close of the harvest, so they do only a very little work in that harvest, after which they of necessity become consumers, and so eat largely of the honey gathered during the harvest, to the loss of the bee-keeper and all concerned. In this way we are producing honey in the most expensive manner, rather than as cheaply as possible.

After studying on this matter some years ago, I came to the conclusion that a small hive would give me much better results, from the fact that with it I could get the greatest force of bees on the stage of action as gatherers, just when the harvest was ripe for gathering, and rear as few at all other times as was consistent with accomplishing this object. After years of experience, I am satisfied with the results, as compared with a like number of years with large hives.

The hive which I use, contains about 1,000 square inches of comb, and as this will give, on an average, about 800 for brood, exclusive of the comb occupied with pollen, and the little honey they always will have in the brood-nest, I have about 1,600 square inches of comb surface that will be kept solid with brood so long as I leave all the combs in the hive. Allowing 28 bees to hatch from each square inch of comb surface, I have 44,800 bees hatching every 21 days. As the queen is capable of placing two and one-seventh generations of bees on the stage of action to where one dies off, this gives me 96,000 bees as the number I can have for the harvest, from each hive, providing that I am able to get the combs full of brood 45 days previous to this harvest.

When the harvest arrives, or a little before, I begin to contract the capacity of the hive down to about 800 square inches of comb surface, so that at all times except *at the right time*, I am rearing no more bees than are actually needed to carry on that work which is necessary to produce this large force just previous to the harvest. Right here lies the secret, in my opinion, of successful honey-production; and I find by mingling with many bee-keepers, as I have lately done, that it is a "something" not considered at all by the average bee-keeper. Only as we fully understand this, and other important items which relate to our pursuit, can we expect to reap the best results from our bees.

Borodino, N. Y.

* * *

KILLING BEES.

Destroying Bees, when Swarming Cannot be Prevented.

Written for the American Bee Journal

BY W. J. DAVIS, 1ST.

It may appear strange to some that the science of bee-keeping should require an article with the above heading, yet such is the fact. I take it for granted that the number who keep bees, just for the fun of the thing, is small. The result in dollars and cents must determine the question of keeping bees, as well as any other kind of domestic animals. I have all the volumes of the AMERICAN BEE JOURNAL from No. 1, Vol. I., to the present time, and I do not remember of seeing an article with the above heading.

The ingenuity of the bee-keeping fraternity has been taxed to its utmost, to devise means of preventing swarming, but the effort thus far I consider a failure when working for *comb* honey. That the giving of surplus room above the brood-nest does in some, and possibly in many, instances prevent the swarming fever, I do not deny; but all bee-keepers of experience know that it is not to be depended upon to prevent increase. Swarming may be kept at the minimum by the use of large hives, and the free use of the extractor, but that plan gives us no comb honey; and where extracted honey will not sell, there is poor encouragement for its production. It matters but little about its merits, if it cannot be turned into "legal tender," or the necessaries of life.

It is quite as much in harmony with the nature of the bee to swarm, as to collect honey and pollen. I have had some severe "tussles" with certain colonies, in saying, "You shall *not* swarm," when they said they *would*. I could cut out queen-cells, and put the swarm back, but with me it has generally been at the expense of whatever labor it took, and the accumulation of no honey while the swarming fever was on. This I say only in reference to first swarms. I must produce comb honey, for that is the demand of the market that I supply. Hence, as there is no way of preventing swarming, how are we to keep our colonies within bounds in large apiaries?

We have reached that point where bees will not sell in the spring, for as much as the hives and contents (minus the bees) are worth in the fall. Clearly, then, it is the better plan to reduce in the fall to the number desired. In so doing, the judicious bee-master will weed out the least desirable colonies. First, all that show any impurity of breeding—I want *no* "black blood" among my Italians. Second, such as do not give a satisfactory honey-record, as compared with other colonies in the same yard and season. Third, such colonies as would not be desirable on account of the age of the queen; and there may be other considerations that would cause the election of some colonies, and rejection of others.

If any should have conscientious scruples about the killing of bees, more than of chickens, lambs, pigs, calves, etc., I would suggest that they had better keep out of the "bee-business," unless they are either fortunate, or unfortunate, enough to lose about half in wintering.

HOW TO KILL BEES.

I first shake and brush the bees from their combs, and remove the combs and honey to safe quarters, and allow the bees to cluster in the empty hive. This I do in the afternoon, or towards evening. If the hive has a stationary bottom-board (as most of mine have), I remove the honey-board and allow them to cluster in the cap.

Early the next morning they are disposed of. I take a box 14 to 16 inches square, with one side hinged for a door, to be opened for the reception of a hot lid from the stove, to be placed on a flat stone on the bottom of the box, to prevent burning. The top of the box should be a little larger than the largest hive or cap to be placed thereon, and a hole 6 or 8 inches square, covered with wire-cloth, for the admission of the fumes of burning sulphur. The hot stove-lid is placed bottom up (to avoid unpleasant smell when returned to the stove), and a good tea-spoonful of sulphur thrown on, and the door closed. As soon as "killed," the bees should be buried, as they would revive in the air and warmth.

I am free to confess that it is a very unpleasant job; as much as I dislike it, it seems as much of a necessity as the killing of other domestic animals.

It sometimes occurs, that we have seasons almost honeyless. When the revenue from the sale of honey is cut off, with even 100 or 200 colonies, the only alternative is to buy sugar for winter stores, or reduce the number of colonies. Such a season occurred here in 1871, and the autumn found me with 130 colonies, with honey for only 50. I "took up" 80 colonies. The next season being favorable, and having clean, empty combs for 80 hives, I found no difficulty in filling them.

Youngsville, Pa.

UNPAINTED HIVES.

Their Advantages Over those that are Painted.

Written for the American Bee Journal
BY C. THEILMANN.

For a number of years I have intended to write an article on painted and unpainted bee-hives, as they have proven their merits under my observation for the past twenty years; but I have always been somewhat afraid to give my experiments publicly, because most of our best bee-keepers take a position in their writings entirely contrary to the results of my experiments. However, I will now give my views of the question.

The first year (1869), I kept bees in a log, which I found in my timber. I increased them to 5 colonies that season, some of which I put into store-boxes, nail-kegs, and whatever was handiest to put the swarms in.

The next season I got painted Langstroth hives, and also in the third, fourth and fifth seasons, but the fifth season I also got 24 hives which were not planed or painted on the outside, but planed on the inside. By that time I took quite an interest in bee-keeping, and noticed that the unpainted hives did not get so hot in summer, and kept much drier in winter, and the bees wintered better in them than in the painted hives.

This, of course, was a big thing for me at that time, as I had a good deal of trouble and loss in wintering my bees; therefore I did not paint any more hives after that, though I did not study the theory much, but I was satisfied that my bees did better, summer and winter, in the unpainted hives, until I read Prof. Cook's experiments, published in the AMERICAN BEE JOURNAL, telling that his students blew out a candle-light, through the pores of an oak plank.

This set me to thinking about my unpainted bee-hives, and it became clear to me, that the pores in the wood are the correct theory, and I have made very practical use of it ever since; though it never was clear to me, that, after all the Professor's experiments (which we have no reason to doubt, even if we have to admit that there must have been some big "blowers" at the Michigan Agricultural College), he not only paints his hives, but advises others to do so; hence I have asked myself many times, to know what those experiments were made for. Will Prof. Cook please tell?

It seems hardly reasonable, that after the above-described experiments, we should paint bee-hives, when we consider the facts, that the paint will close all the pores of the wood, stop all circulation of air, and contract the heat of the sun, so that the hives get so hot that if a person put his hand on the top or sides, he would get it blistered in a short time; and many combs have melted down in the hives from the same effect; when, if the wood were left unplaned and unpainted, but little or no reflection would be created, circulation would not be stopped, and in cool nights the vapor would not condense on the inside of the hive, as it would have a chance to escape through the pores—in a word, an unpainted hive keeps nicer, drier, and does not get so hot in summer as does a painted hive.

Some will say that unpainted hives look homely. Well, they may look homely to some, but I can say that I know some *people* who look homely, but when I get better acquainted, I find that they have good hearts, and I like them; or, when I sit down hungry, at a table, and it is loaded with a lot of nice-looking dishes, some empty, and some containing unfit food, then my apetite will not get a bit of satisfaction.

Some pretend that painted hives will last longer. This is only talk and theory, without actual practice—at least I find it so here. The hives that I got 15 years ago, show that the unpainted ones are, to-day, in better condition than the painted ones that I got the same year. Lately a number of bee-keepers who visited me, wondered that I do not paint my hives; but when I explained the advantage that there was in it, and showed them the hives used for 15 years, side by side, they acknowledged that I had given facts.

Theilmanton, Minn.

PRIZE ESSAY.

Extracted Honey—How Produced by the Bees.

Written for the American Bee Journal
BY MRS. L. HARRISON.

"The bee sits on the bloom, extracting liquid sweets."

Many persons have a mistaken idea, with reference to extracted honey; they think that it is an essence, obtained by some chemical process. Pure extracted honey knows no chemist but the bee (or ever has known), which sits on the flower, extracting or drawing out sweets, made in Nature's own laboratories, which are the corollas of flowers. When the bee draws out the honey from a blossom, she deposits it in her sac, and flies to another flower. In her rapid flight, much of the water in the nectar is evaporated, and when her load is completed, she flies home and deposits it in a waxen cell, or gives it to young bees to feed the brood.

THE WORK IN THE HIVE.

In the economy of the bee-hive, each inmate has its allotted task—the field-workers gather nectar, propolis, pollen or water, while those in the hive secrete wax, build cells, prepare the food for the queen, drones or brood, store the honey when brought in, protect the colony against its enemies, and are always on the alert to preserve the happiness and prosperity of the colony.

GATHERING AND STORING HONEY.

Now let us watch a colony of bees during a high day in clover bloom. See the well-laden bees, come sailing in and dropping at the entrance, like ships after a long voyage, coming into port. The stevedores unload her quickly, and she sails away with her gauzy canvas spread to the wind, after another cargo.

Now let us take a look at what is going on within the hive, as to the deposition of the surplus honey brought in. At night, all the workers are invited to a grand "evaporating frolic," and no youngster, at a sugaring-off in a maple-sugar camp, ever enjoyed the fun more. The thin honey is taken from the cell, and worked back and forth on their proboscides, in a similar manner to the candy-workers; while the ventilators are plying their wings vigorously, to waft off the moisture. When the "sap" is boiled down to honey, it is again stored in the cells.

Now let us watch the building and storing of a cell of honey. The tiny base is first constructed, a little concave, and a drop of honey deposited;

then the sides of the cell are raised a trifle, and honey added, continually raising the sides, and filling until it is completed, when the sealing is commenced, gradually expelling the air, and sealing. The bees were the first canners known, and "goods" put up at their establishment will keep for all time, if stored in the right kind of an apartment, free from frost and dampness.

HOW EXTRACTED HONEY IS SECURED.

Extracted honey is this honey poured out of its waxen cell, just like we uncap a can of fruit, and pour its contents into another vessel, suitable to put upon the table. The sealing is cut from the cells with a very sharp knife, and then it is put into a wire basket, which revolves within a tin cylinder, and revolved quickly, when the cells are emptied by centrifugal force. The honey, as it is thrown against the sides of the can, runs down into the bottom, and is drawn off through a gate into suitable vessels.

In whatever shape this product may be bought in the open market, of this country, if it bears the name of the apiary and producer, it will prove to contain nothing but pure sweet distilled in the corollas of flowers.

Peoria, Ills.

HIVES.

Chaff or Double-Walled vs. Single-Walled Hives.

Written for the American Bee Journal

BY T. C. KELLY.

Having 33 colonies of bees, consisting of Carniolans, Italians and natives, all in good condition, I may possibly be entitled to the appellation of "bee-man;" and so I want to express my opinion in regard to chaff or double walled hives *vs.* single-walled hives.

I use a hive, the dimensions of which accommodate a frame 10¼x15¼ inches, inside. I make the inside wall of ¼-inch boards, and the outside wall of ⅞-inch stuff, with ⅞-inch air space between. I pack with chaff, in winter and summer. I have a detachable section-case, which I fill with loose buckwheat or oats chaff, after removing the enameled cloth in the fall. I place about two thicknesses of burlap over the frames, after having prepared passage-ways over the frames for the bees during a cold spell. I winter the bees on the summer stands, and have never lost a colony, when properly prepared in this manner. Yet my neighbors, who winter their bees in the single-walled hives, lose some each winter—and so did I when I used single-walled hives, even to all the bees I had.

As to double-walls being too cool for storing honey, let those who think so, watch their hives on some warm day in May or June, and see if they do not find a large number of bees fanning at the entrances. What is that for? Is it to cause a circulation of air, or to pass away time? If to cause circulation of air, then the double-wall is not too cool; if to pass away time, then say, "lazy little bee."

My hive weighs about 25 or 26 pounds, without the section-case or cap. I view this matter in about the same light as almost all bee-keepers of the present day view the legendary stories of "king bees," and "telling the bees" when a member of the family has died (for good luck). But there are some "slow to learn."

Last evening a neighbor said to me, "I find water on the cloth in my hive every time I look at it." I asked, "What kind of cloth do you use?" He answered, "Enameled." Having neglected to remove the enameled cloth, the result was condensed moisture and no absorbent.

Slippery Rock, Pa.

TEXAS.

Horticultural Society—Honey-Production in Texas.

Written for the American Bee Journal

BY A. C. ATEN.

On Feb. 17, the American Horticultural Society held its biennial meeting in Austin, Texas, in Representatives' Hall at the Capitol. There were persons here from almost every State in the Union, and a more intelligent body of men it would be difficult to find. They continued their meetings for four days, and during this time there was an exhibition of horticultural and other products in the Agricultural Department of the Capitol.

The Capitol of Texas is the seventh largest building in the world—built of red granite, and is nearly 600 feet long, and almost 300 feet wide, three stories high besides the basement; it contains 258 rooms, and is 311 feet high from the grade line to the top of the dome. A better place for an exhibition would be hard to find.

EXCELLENT EXHIBITS OF HONEY.

Our enterprizing apiarist, Mrs. Sherman, of Salado, Tex., had a very pretty exhibit of honey, honey preserves and Houdan eggs. She produced some 6,000 pounds of honey last year, all of which is sold.

I had on exhibition about 800 pounds of honey, comb and extracted; quite a number of different kinds of honey, such as horse-mint, wild marigold, broom-weed, cotton, rich-weed, morning-glory, etc. I had about 20 glass two-quart cans, one-third of which was granulated; the balance, except the comb honey, was in one-gallon tin cans, with screw tops. My honey proved a great attraction, and I sold it nearly all by the time the fair closed. A few days ago I had an order for honey which I filled, to go to New York, near West Point.

We had by far the coldest weather of the winter about Feb. 26. The bees were beginning to do well—now the most of their supplies are cut off.

HONEY STATISTICS OF TEXAS.

I have just received the annual report of the Agricultural Bureau of the State of Texas, and with some considerable time and care, I have compiled a few figures in regard to the honey-product of this State, for the year 1888, which I hope will be interesting to all. This report was gathered by the assessors, while assessing the property in the spring of 1889, and I presume that it can be relied upon as nearly correct.

The year 1888 was a very poor honey-year for the greater portion of Texas, my own yield, however, that year was over 120 pounds per colony, spring count.

The total number of colonies in the State was, 146,322; total number of pounds of honey, 2,610,100; total value of the honey, $257,989.

The largest number of colonies in any one county (Ellis), 4,644; smallest number (in Galveston and Hardeman), each 6; average number of pounds per colony for the State, 18; average value per pound, 10 cents; least average price per pound of any one county (Waller), 5 cents; largest average price per pound of any one county (Starr), 25 cents.

The greatest yield was in Williamson county, 128,053 pounds; most valuable yield (Williamson county), $10,437; highest average yield was in Brazoria county, 53⅔ pounds per colony; lowest average yield, Grayson county. 1⅓ pounds per colony.

In Uvalde county, 2,375 colonies yielded an average of 40 pounds per colony. The smallest number of pounds reported for any one county was in Greer county, being 50 pounds.

The statistics in regard to honey are tolerably complete, and, I think, reliable. The production of honey in this State, I really believe, is just in its infancy. There are perhaps a thousand pounds of honey lost, to one pound that is gathered by the bees in Texas. What a saving of money and health, if this was all saved and used here, in the place of the other sweets!

Round Rock, Texas, March 7, 1890.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Hive-Entrances and Ventilation.

In reply to Mr. A. N. De Groff's question on page, 188, I would say: To close, or partly close, the hive-entrance, I use a square piece of board ⅜ of an inch thick, and some longer than the entrance of the hive, driving an inch wire-nail through the center, the point reaching ⅛ of an inch through, so that when placed at the entrance, with a little pressure it fastens it to the bottom-board so that the bees or wind cannot remove it. It is very handy to adjust as desired. I remove my bees from the cellar in the evening; the next day they will come out undisturbed, and locate themselves much better. In removing bees from the cellar in the daytime, it helps very much to fill the cellar with smoke; then placing on the blocks, you need not lose a bee. It will not do to shut bees in long at a time, unless they are in the dark, as they will worry themselves to death.

Bronson, Mich. Byron Benton.

Double-Walled Hives.

I have read with interest the discussion for and against double-walled hives, and cannot help giving my experience, for I have used nothing else for the last five years, and have not lost a colony. I make mine out of ½-inch lumber planed on both sides, with ⅜-inch dead air space, and loose bottom-boards ⅞ of an inch thick. In winter I simply fill the cover with chaff, first putting canvas on top of the brood-frames. These hives are no heavier than hives made of ⅞-inch lumber, and are much cooler in summer. They are the easiest for tiering up for comb honey, for the tiers can be run to any heighth; or can be used for extracting, as I do, by putting on extra brood-chambers on top, in place of the sections.

F. W. Taylor.

Bee-Keeping in Nebraska.

Last season bees here did fairly well, but not so well as the year before. The yield was good for this part of the country, but not as good as in some other places. Bees are wintering well, as a general thing. Mine are wintering out-of-doors, banked with hay; they were put away in December, and I had not looked at them until to-day. I found one colony dead out of 35; it was a late swarm, coming in September, and did not have enough honey; but the balance have plenty so far, and will have if the spring is not very late. I have been keeping bees three years, and this is the first that I have lost. I take the greater part of my honey with the extractor, and I like it best. I have no trouble in selling it, having sold my crop so far at 10 and 12½ cents for extracted, and 12½ cents per pound for comb honey. The extracted is much less trouble, and easier to take care of. I put it in open stone-jars, tie a paper over the top of the jar, and put it upstairs; it has cured nicely, and has not grained any yet. I use the Langstroth frame, but not the hive, but one similar to it, except the cap. The body of the hive is like the Langstroth, except that I nail a band around one inch from the top, and have the cap rest over that, making a water-proof box, and it is handy. Jas. Kincaid.

Clay Center, Nebr., March 12, 1890.

Wintered Nicely—Tiering Up.

I started last spring with 13 colonies, and increased them to 37, which I will have to commence with this season. They have all wintered nicely so far. I noticed on page 187, in a letter entitled "Management of Bees," the writer said that he had some trouble in getting his to start to working in the supers. If you will permit me, at some future time, I will give my method of tiering up. I prize the Bee Journal very highly. A. M. Tinker.

De Witt, Iowa, March, 14, 1890.

[Certainly; we want all the light, and if you have anything *new*, we would like to give it to our readers.—Ed.]

Spacing and Inverting Hives.

For two or three years I have been trying to think of some way of inverting and properly spacing Langstroth frames, and without cutting the projecting ends of the frames off. I am pleased to say that I have found it in the Wilcox spacing arrangement. I have changed my eight-frame Langstroth hives with fixed bottoms, to loose bottoms, with ¼-inch strips on the two sides and rear end, so that they can be inverted or tiered up. This arrangement also provides against unproper spaces at the ends of the frames, as they sometimes get racked endwise. It also keeps the ends of the frames free from propolis, and holds one or more frames in place as well as a hiveful, and is also a great convenience when moving or shipping bees. Walter Harmer.

Hive-Entrances when Moving.

On page 188, Mr. A. N. DeGroff asks "how to close the main entrance to hives when moving them to and from the cellar," etc. My plan, which I find very convenient, is to take a piece of board ⅜-inch thick, and about one inch wider, and 2 or 3 inches longer than the opening in the hive; cut a piece from one edge, about ½-inch wide, and 2 or 3 inches shorter than the strip; tack wire-cloth over the space thus made, and place this strip over the entrance to the hive, having first fitted a screw through the upper edge of it, and a few turns of the screw will hold it securely in place, closing the hive, and giving the ventilation desired. A wooden button placed above the strip in such a way as to be turned down over the strip, will hold it in place, and is even more convenient than the screw for contracting the entrance against robbers or cold air. I use a strip without the wire-cloth, moving it to one side so as to give space for one bee or more to pass at the side of the entrance. A square piece of wood placed on the alighting-board, heavy enough to remain in position, will answer the purpose. J. M. Clark.

Hillsdale, Mich., March 15, 1890.

Against Migratory Bee-Keeping.

I notice on page 145 that Byron Walker, of Michigan, wants to come with a big load of bees in July, when basswood is in blossom. I will say right now that we do not want him here at all, if he comes with so many bees to take the bread from our tables, and then sell the honey for almost nothing here, and ruin our markets all along the Mississippi. That is what we do not like, for it is not profitable for us here on the river. I had 12 acres of land, but it was not good for bees, so I sold it last year and bought a better place here, close to the Mississippi river, about 20 miles north of Dubuque, Iowa. I want to make some money, and I do not want to be bothered by Byron Walker and his bees. There are more bee-keepers here that talk the same as I do. Cannot Mr. Walker stay at home and make the business pay, as any other good bee-man does? Peter Ehl.

Sherrill's Mount, Iowa, March 10, 1890.

Good Season Expected in Utah.

After one of the hardest winters, we are just beginning to have spring, which is rather late for this region. The probabilities are considerable loss in bees; we anticipate, though, a much better honey season this year than we had last.

John C. Swaner.

Salt Lake City, Utah, March 17, 1890.

Enlightened by the Almanacs.

On March 12 bees had their first flight since Nov. 15, 1889. There is 2 feet of snow on the ground now. I was in town the other day, and asked a woman if she did not want some honey. She wanted to know if the bees *made* honey when there was so much snow on the ground! Another person wanted to know what the queen did when the "king" died. I will give these people some Honey Almanacs, to enlighten them. I got one barrel full of golden-rod honey. Some of my colonies in the cellar have the diarrhea. Henry Stark.

Pulcifer, Wis., March 17, 1890.

The Use of Swarm-Hivers.

I have read Mr. Lacy's description of what he calls a "swarm-hiver," on page 170. It seems to me that Mr. Lacy, or myself, has attached a wrong name to such a device. How can the arrangement of Mr. Lacy's be called a "hive-swarmer?" Any one who will look at that arrangement for a moment, will say that no queen is likely to pass through the side of the hive, and into an adjoining hive at swarming time. It is natural for the bees and queens, when a swarm issues, to pass out at the regular entrance that the bees have been accustomed to use. Then, again, if the queen should pass into the vacant hive, what will prevent her from returning to the home hive? If Mr. L. has a device to prevent the queen from returning to her own combs, then he infringes my "rights." But as there is so little chance of any queen being captured by the arrangement he proposes, I will not take space to discuss it here.

It seems to me when Mr. Lacy constructed his swarmer, he did not properly consider the nature of the bee; had he done so, he would have devised a little different arrangement. When I devised my swarmer, the following points were considered, viz: 1. The bees must issue from the hive through the regular entrance. 2. Some way to rid the swarmer of drones must be provided while the swarmer is on the hive, as the drones will certainly leave the hive by the same exit that the other bees do. In this respect, the swarmer will serve as a drone-trap. But with the Lacy swarmer there is no outlet for the drones. Those who have used the metal "drone stopper" (if I may call it by that name) know how much the drones bother and hinder the worker-bees in their work, and stop the ventilation (in a hot day) to the hive containing a large colony of bees.

I should say that the Lacy device is a better non-swarmer than a swarm-hiver. By such an arrangement the bees will be more likely to be crowded into the vacant hive during hot weather, than they are to swarm. But, then, if such a claim is worth anything, why not use a much better and simpler device, and one that can be operated without any perforated metal? Place an empty hive under a full colony, and the bees will gradually work down into it, and no swarm is likely to issue. Increase, however, is not what most bee-keepers desire. Honey is the thing that we are all after. My swarm-hiver is intended to catch a swarm, in case one issues. It is not necessary to place a hive to catch the bees—almost any kind of a box will do.

HENRY ALLEY.

Promptness—Wintering Well.

Doolittle's "Scientific Queen-Rearing" came in just four days from the time the money left here. Bees are wintering very well from all appearances, and from what I have seen and heard others say. The weather is very warm, and bees are flying almost every day. WM. HEYWOOD.

Stafford, N. Y., March 13, 1890.

[It is our aim to fill all orders on the day they are received, as well as to answer all business letters immediately upon their receipt. "Punctuality" is our office watchword.—ED.]

That Wide Top-Bar.

Such an article as Smith & Smith's, on page 186, really needs some comments in order not to lead its readers astray. They have a plain box with about my new style of bottom-board under it, and that is not so bad; they have a T case, with about my old-style of cover on it, and that is not so bad; but their top-bar would make the most unprofitable condition in a brood-chamber, possible. The width of the top-bar is just about the same as the distance combs should be apart from center to center. Now as these top-bars do not, and could not, touch each other, and must be separated, they will have the worst lot of drone-comb and brace-combs plugged in between the edges of the top-bars; and I know that *here*, they would have plenty of brace-combs between the tops of the top-bars and the sruplus receptacles. The only reason I call attention to it, is because I think that it is really too bad for any one to mislead young and inexperienced bee-keepers. JAMES HEDDON.

Dowagiac, Mich., March 14, 1890.

What Ailed the Bees?

Last fall I put 80 colonies of bees in my bee-house cellar—40 of them were blacks, and the remainder Italians and hybrids. The black bees were in rather better condition to winter, but the Italians had had as good a chance to preparo for winter quarters as the blacks. About two months ago the hybrids began to die—several colonies died during January, 8 in February, and to-day there are only 4 or 5 of them left—I think that they will go to. Not one of the black colonies is dead.

I have carefully examined the hives, and find that about one half of them died of starvation, while the rest had from 2 to 20 pounds of honey in the hive. My experience the past three winters has been similar to this—the Italians and hybrids died while the blacks wintered all right. I should call my case an exceptional one, were it not for the fact that other bee-keepers in this vicinity are having the same experience. The temperature has not been below 30 degrees in my cellar, and has generally been at 38 or 40 degrees. Can any one give the cause of the trouble?

AKED D. ELLINGWOOD.

Milan, N. H., March 13, 1890.

HONEY AND BEESWAX MARKET.

MILWAUKEE, March 13.—The demand for honey is very good, and the supply is fair. We quote: White 1-lbs.,12@13c—and if absolutely perfect, sometimes 14c.; choice, white 2-lbs., 12@12½c.; dark 1-lbs., 10@11c.; old 1-lbs., 8@9c. Extracted, white, in barrels and half-barrels, 7½@8c.; in pails and tin, 8@8½c.; dark, in barrels and half-barrels, 6@6½c. Beeswax, 22@25c.

A. V. BISHOP, 142 W. Water St.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.

M. H. HUNT, Bell Braach, Mich.

KANSAS CITY, March 6.—The demand for honey is improving a little, but it is no better in prices. White 1-lbs., 11@12c.; white 2-lbs.; 10@11c.; fall 1-lbs., 9@10c.; 2-lbs., 8@9c. Extracted, white, 7c.; dark, 5@6c. Beeswax, 22c.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Mar. 13.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

CHICAGO, March 6.—Honey is selling quite well in a small way, at 12@13c. for white 1-lbs., and 10c. for 2-lbs.; dark is slow at 8@10c. Receipts are heavier than usual for this season of the year, but all is called for as fast as it arrives. Extracted is dull at 6@8c. Beeswax, 25c.

R. A. BURNETT, 161 S. Water St.

BOSTON, March 22.—Fancy 1-lbs., 16c. Anything off-grade sells considerably below 16c. The market is bare of fancy, 1-lb. white honey. Extracted, 7½@8½c. No beeswax on hand.

BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

NEW YORK, March 22.—The market is well stocked with extracted honey. We quote: White clover, basswood and California, 7@7¼ per lb.; Southern, 70@75 cts. per gallon. No demand for comb honey, except for fancy stock, at from 12@13c per lb. Beeswax, 27c.

HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cents. For sale at this office.

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The 7 above-named papers	5 25....	5 00
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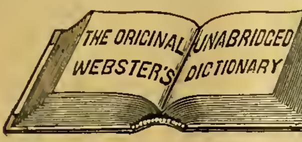

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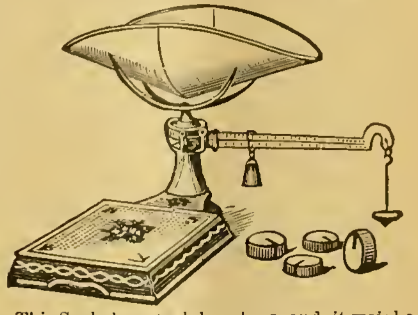

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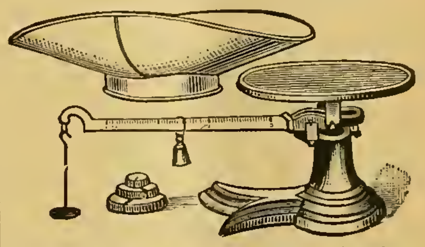

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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. April 5, 1890. No. 14

EDITORIAL BUZZINGS.

How Dreary would the garden be,
With all its flow'ry trees,
Suppose there were no butterflies,
And if there were no bees!
—*Alice Carey.*

☞ The recent "cold snap" will make "feeding" necessary in some apiaries. Do not neglect such if the bees are short of stores.

☞ The little son of Mr. and Mrs. Edw. Margileth, of Mt. Carroll, Ills., died on March 7. The BEE JOURNAL extends sympathy to the afflicted parents.

☞ In the article of Smith & Smith, on page 186, the width of the top-bar should be seventeen-sixteenths (not 1 7-16 as there printed). It was written in figures, and hence the mistake of the printer in putting it in type.

The Time for Spring Work will soon be here, and those who need a guide for all the operations in the apiary, should procure a copy of Dr. Miller's book entitled "A Year Among the Bees." Its descriptions commence with the necessary work in the spring, and run through the entire year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. We have only a limited number of copies left, and those who want it should send for it at once. We will hereafter mail it, bound in cloth, to any address for **50** cents, until all are gone.

Honey Used as Medicine by the Ancients.—In all ages honey has been considered a valuable article of medicine, but we believe that henceforth it will prove itself a greater aid in healing the diseases of mankind, than heretofore. All through the ablest and oldest Book of books, honey is very frequently referred to as an excellent food element, and the prophets and wise men realized the great usefulness of this "concentrated sweetness" as a sustainer of life.

In a recent article written for the *Sunday School Times*, by Prof. A. H. Sayce, L.L.D., of Queen's College, Oxford, England, that learned investigator of antiquities has brought forth a most interesting account concerning "Medicine in the Ancient East." One of the literary documents (36 feet in length) found at Thebes, which was written about 100 years before the birth of Moses, contains a complete account of ancient Egyptian medicine. In it the different diseases known at that time are carefully described, and remedies given for treating them.

Among those mentioned in the above-named old treatise, are the following prescriptions in which honey was used:

> Medicine for opening the bowels: "Take of milk one-third of a *tena;* of *nequat*-powder, one-fourth of a drachm; of honey, one-fourth of a drachm; boil, pour out, and drink for four days."
>
> Medicine for moving the bladder: "Take of honey....; of powder of the carob bean ....; of powder of the vitex agnus....; make it into a pill."
>
> Medicine for a purge: "Take of *senta*, one-eighth of a drachm; of honey, one-eighth of a drachm; mix and eat.

In a very long prescription for treating an attack of spleen, "which consumes the top of the heart," among the very first articles named, "half an ephah of clear honey" is mentioned, showing that extracted honey was not unknown to those who lived long before Moses.

By the foregoing quotations we see clearly that honey has been prized as a medicine for many centuries, and we are glad to see that it is again taking its proper place in the treatment of many diseases of the present day. Verily, the "land that floweth with milk and honey," is indeed a goodly land now, as well as in the days of Moses.

In California bees are now ready for the honey harvest. Mr. S. L. Watkins wrote us as follows on March 27, concerning their present condition:

> The bees in this part of California, have wintered exceedingly well, considering the bad weather we have had. All colonies are now strong in brood and bees. The alfilaree is beginning to bloom, and the mountain-sides are clothed in their mantles of green.

☞ Mr. W. C. R. Kemp has sent a sample of his cold-blast smoker to our Museum. It is neat, and substantially made.

Bee-Escapes. We are pleased to notice that so many are working on bee-escapes. It shows that there is a real *need* for such a contrivance, and the intelligence and inventive genius of bee-keepers will develop something that will be valuable. We this week give an illustrated article from Mr. John S. Reese, showing his latest development. Last week we gave an illustration of one invented by Mr. C. Russell. Concerning the latter we have received several criticisms, one of which is as follows:

> The exit hole A is entirely too small; 3 inches would be better. The triangle being made of wood, will lead the bees directly to the exit B. Of course many will pass over or around the open end of the triangle, but many others will easily find the opening.

Babboons Eat Honey.—The bee-enemies in America are many, and skunks, bears, rats and mice steal the honey, but their depredations are not to be compared with what African bee-keepers have to contend with. The South African babboon has made the discovery that honey is good to eat, and comes down from the mountains of the district he inhabits, and carries off hives, honey and all, utterly destroying an apiary at one visitation. We ought to be thankful that we have no babboons.

Alsike Clover chaff is good feed for cattle, says the Fremont, Mich., *Indicator*. Here is the item:

> Mr. Wm. Davis threshed from 1¼ acres ten bushels of Alsike clover seed. He says his cattle ate the chaff in preference to any other feed.

Friend George E. Hilton lives at Fremont, and no doubt picked up that interesting item, and got it into the *Indicator*. He always has an eye to business.

To Prevent Robbing, close the entrance so as to give passage but for a single bee at a time. This is effective, if the bees will defend themselves; if not, remove them to a cellar for a few days, then place them on a new stand, or exchange places with the colony that is robbing it.

The White Sage of California, has been long and favorably known as an excellent honey-plant; giving some of the lightest-colored honey in the world; but, like our basswood, its area is getting to be limited. It is fast disappearing before the cattle, sheep and plow.—*Exchange.*

☞ According to Geo. P. Rowell & Co's American Newspaper Directory for 1890, Illinois is now the second State in the Union in the number of newspapers printed, having 1,309, while Pennsylvania has but 1,281. New York has 1,778.

GLEAMS OF NEWS.

Painting Bee-Hives.—As the subject of painting hives is being considerably discussed just now, it may be interesting to know what others are saying in regard to the matter. Mr. Theilmann, in his article on page 217, has advanced an idea that may be more than mere theory, when once thoroughly investigated, as it doubtless will be looked into in the future.

In this, as well as in other matters pertaining to the pursuit of bee-beeping, it may be very profitable to experiment, for if it is really unnecessary—or quite detrimental—to paint bee-hives, those who are getting their hives will want to know it before they go to the expense of beautifying the homes of the bees with artistic colorings that may prove to be harmful to the lives of the occupants during the trying winter season.

The following paragraphs from an exchange, taking the opposite view, may be valuable, although it does not mention what success has been had in wintering bees in the painted hives:

> My experience is that it pays well to paint bee-hives three or four good coats, when made. I recently saw bee-hives which I made some seven years ago; at that time I gave them three coats of white lead, zinc and oil. Two years later I sold them with bees in, and they have been exposed to the sun, rain and winds ever since, without any further painting. They are now in fair condition, look well, not sun cracked, and the corners not drawn apart as unpainted hives usually are in a year or two.
>
> I sometimes mix a little red in the last coat for the front of some of them, just to make a little difference, so as to assist the bees in finding their particular hive. I do not know, however, that there is any advantage in this; for it seems to me that bees know how to find their homes, as well as we would if a hundred other houses just like ours were around it.
>
> White paint is durable, and is cooler in summer than any other tint; and if the hives are within four inches of the sod or ground, I rarely have any combs melt down. In fact I do not remember having had a case of it for over seven years, notwithstanding the hives are in the open sun, without any shade at all, either natural or artificial. If painted a dark color, which is sometimes done to save a few cents in material, the combs are exceedingly liable to melt down in the heat of summer, thus causing more loss than is saved in buying cheap paint. My friends say that my bee-yard resembles a little cemetery, with its long rows of white hives; but while that may be so in winter, it resembles a Chicago Board of Trade in summer, to judge of the way they do business.

◆

Stanley is to have a rival. An exploring expedition is just starting for the interior of Alaska. It is sent out by Messrs. Arkell & Harrison, proprietors of "Frank Leslie's Illustrated Newspaper," who offer prizes of a $200 photographic camera, and a $50 Kodak to the amateur photographers who shall send to it the most artistic specimens of their work. "Frank Leslie's" last week portrays vividly the cruelties practiced on United States marines.

They Eat the Eggs of Bees.—The curious life-history of insects is always interesting. We give the following from an exchange:

> There is a hard sand-stone in Provence, interspersed with friable strata, in which burrowing insects construct their chambers. A kind of bee, the anthophorus, says H. de L. Duthiers in the *Popular Science Monthly*, makes nests there and fills them with honey, on which it leaves its eggs to float, then, finally, plasters up its chamber. Instead of anthophores, entirely different insects come out from the nests—sitaris, belonging to a group very remote from the bees. Let us see how they manage to substitute themselves for the legitimate proprietor of the nest.
>
> In the autumn the impregnated female of the sitaris deposits her eggs in front of the sealed galleries of the anthophores. The young are hatched from these eggs and lie in front of the closed doors, and thus remain in a mass, mingled with the duft and rubbish of the place, through the winter.
>
> In the spring, such of the bees as have reached their term, come out from their prison. These earliest insects are all males; but, though precocious in being hatched, they are still tender to the changes of the weather, and remain half frozen and torpid in the dust along with the young of the sitaris.
>
> They have been called triongulins by Leon Dufour, from the claws with which they are armed, and by which they attach themselves to the bodies of the anthophorus waiting for the next stage in the conditions that favor their development. With fine weather the anthophorus come out and carry on their work of burrowing and storing up honey until the time of fecundation arrives. Then the triongulin changes its quarters from the body of the male to that of the female, where it remains on the watch for the laying of the egg, when it transfers itself to that, and with it enters the honey-chamber.
>
> With it it is shut up when the anthophorus closes the door of the chamber for another season. The triongulin will not eat the honey, for it is sure death to it by drowning if it touches it. It floats on the egg, and feeds upon it. When it has used up its ration it changes its shape, as well as its habits and tastes. It is as eager now for the honey as it was to keep away from it, and grows upon it until it goes through another change, and becomes the sitaris which we observe coming out from the chambers of the anthophorus. Three years of assiduous studies and investigations were required to obtain this life-history.

◆

Signs of Progress.—Under this heading, D. R. Emery, of Longmont, Colo., writes to the *Farmer* as follows, on March 13, 1890:

> In the AMERICAN BEE JOURNAL we notice descriptions of hives, and improvements in handling and hiving swarms. This shows life and progress. Thinkers and experimenters are sometimes called "cranks," but it is through such leverage we are sometimes lifted out of old and worn-out ruts, into ways of progress and useful convenience.
>
> What are some of the needs of the busy apiarist? Simply, expeditious hiving of swarms; easy access and handling of frames, sections and honey; exclusion and control of bees and queens. Alley and Lacy show quite a simple automatic swarm-hiver, the principle of which seems correct; which, no doubt, with a proper understanding of adjustment and material used, will prove a great blessing, and be appreciated by the fraternity.

Hints to Supply Dealers.—The following letter just received from one of our advertisers, who speaks from years of experience, should be read by all who have anything to sell, and desire to find purchasers for the same:

> During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.
>
> The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.
>
> We regard the American Bee Journal as a first-class advertising medium.
>
> Cedar Rapids High-Speed Engine Co.,
> HENRY RICKEL, *President.*
> March 22, 1890.

◆

New Catalogues and Price-Lists for 1890 are received from—

Dr. G. L. Tinker, New Philadelphia, O.—24 pages—Hives, Sections and Bees.

W. W. Bliss, Duarte, Calif.—4 pages—Apiarian Supplies.

Aaron Hunt, Gordon, O.—24 pages—Supplies for the Apiary.

H. H. Brown, Light Street, Pa.—18 pages—Bees and Bee-Keepers' Supplies.

W. S. Vandruff, Waynesburg, Pa.—8 pages—Bees and Supplies for the Apiary.

W. J. Row, Greensburg, Pa.—8 pages—Apiary and Hive Factory.

Levering Bros., Wiota, Iowa—20 pages—Bee-Keepers' Supplies.

F. C. Erkel, Le Sueur, Minn.—4 pages—Apiarian Supplies.

J. W. Clark, Clarksburg, Mo.—12 pages—Bees, Queens and Supplies.

Frank A. Eaton, Bluffton, O.—16 pages—Italian Bees and Queens. Also another of 6 pages devoted to Poultry.

G. D. Black & Bro., Independence, Iowa—16 pages—Seeds and Apiarian Supplies.

Lewis Roesch, Fredonia, N. Y.—20 pages—Small Fruit Plants, etc.

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Convention Notices.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890. D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.
J. W. ROUSE, *Sec.*

QUERIES AND REPLIES.

Building a House for General Use in the Apiary.

Written for the American Bee Journal

Query 698.—1. What would be the most convenient arrangement for a house to be used for all the accommodations of an apiary of 75 or 100 colonies, to include shop, store-room for honey, hives, etc.? 2. Should it be one story high, or two?—W. Va.

2. I prefer a two-story building.—G. M. Doolittle.

I am not prepared to answer either question.—M. Mahin.

1 and 2. Your own taste and convenience should decide.—A. B. Mason.

Get any of the standard works on apiculture for answer.—G. L. Tinker.

Two-stories high; make a double floor above, so that no dust will work through the floor.—H. D. Cutting.

1. I think that the one illustrated in my "Bee-Keepers' Guide" is excellent. 2. Two stories.—A. J. Cook.

1. Space will not admit of a reply to this query in this department. 2. It should be two stories, unless in a dangerously windy location.—James Heddon.

1. I could not give a full answer in so small a space. 2. I prefer two stories.—C. C. Miller.

This question is treated in the bee-books, and requires too long an answer for this place.—J. M. Shuck.

I would advise the questioner to visit some well-managed apiarian establishment, and look around. To answer this question, would require a whole article, with diagrams.—J. P. H. Brown.

1. This would depend much upon the situation of the bee-yard, surroundings, etc., details of which would be too lengthy for this department. 2. I presume a two-story building would be preferable.—J. M. Hambaugh.

I like mine, which is 30x30 feet, one story, divided into two rooms below—one for honey, and the other a shop. There would be plenty of room above for storage of hives, etc., which answers well for 400 or 500 colonies.—R. L. Taylor.

If I were to build such a house, I would figure on an octagon two-story building, 14 or 16 feet across. I would use the ground floor for a shop, and the second story for honey, and such other fixtures as would seem best.—Eugene Secor.

1. A house about 14x18 feet. 2. Two stories high, the upper story to be used for a shop for making hives, etc., and storage of the same; the lower story for the storage of honey, cases, etc., and a cellar underneath could be used for the storage of bees in winter.—Mrs. L. Harrison.

1 and 2. Octagonal, two stories high, with L for work and storage room. I do not think that a house apiary will be a success, and would not advise any one to build one; I speak, however, from information—not from experience.—J. E. Pond.

I should set it on high ground, and have a good bee-cellar under it. The shop I would arrange on one end of the first floor, and a store-room for honey on the other. A second story would be very convenient for storing empty hives, supers, etc.—C. H. Dibbern.

This department is too limited in space to more than hint at a plan for convenient apiary buildings. My plan is to have the building but one story high; 15 feet wide, and as long as necessary for all purposes. Have an 8 foot office in front, next to the honey store-room, then the extracting room 7½ feet, and, lastly, the shop. A good cellar under the store and extracting rooms will be convenient and useful.—G. W. Demaree.

Build it to suit your fancy or requirements. We should prefer it to be two stories high, about 20x30 feet, with two rooms below and one above. The latter should have a double floor to keep the dust from the lower rooms, in one of which the honey can be stored; the other would make a good work-shop. The upper room will be excellent for storage.—The Editor.

Langstroth Hive—Placing the Comb Honey Super.

Written for the American Bee Journal

Query 699.—1. What is the proper proportions for the Langstroth hive? 2. Should the super for comb honey fit directly on the top of the hive, or *inside* of the same—resting on the top of the frames?—Michigan.

2. On top.—Mrs. L. Harrison.

2. On the top of the hive.—R. L. Taylor.

1. If I used the Langstroth hive, I would have it hold ten frames. 2. On the top of the hive.—M. Mahin.

1. Nineteen and ⅞ inches long, outside measure; 15⅞ inches wide, outside measure, and 10 inches deep. 2. On top the hive.—A. B. Mason.

1. See Langstroth's book. 2. It should fit the honey-board, resting on the outside rim of the hive—never on the brood-frames.—C. H. Dibbern.

1. The *Langstroth*, of course, otherwise it ceases to be a Langstroth hive. 2. On top of the hive or a honey-board.—G. M. Doolittle.

1. The frame is 17⅜ by 9⅛. The hive I prefer holds eight frames, so that it would be, inside measure, 12x18 inches, and 10 inches high. 2. On the hive, scant ⅜ of an inch above the frames. I prefer this.—A. J. Cook.

1. The Langstroth hive that I use is 20 inches long, 13¼ wide, and 9⅝ inches deep, outside, made of ⅞-inch lumber. The frame is the "standard Langstroth," 17⅜x9⅛ inches. 2. The super should rest on the hive, and the same size outside, as the hive.—H. D. Cutting.

1. The Langstroth frame is 17⅜x9⅛ inches—top-bar 19 inches long. Now you can make the body of the hive to suit the number of frames you desire. 2. I prefer to have the super *inside* the hive, and to rest on top of the frames.—J. P. H. Brown.

1. Unfortunately, the size of the Langstroth frame is not uniform, as made by different men. I always supposed it to be 17⅜x9⅛ inches, outside measure. Some make it 17⅝x9⅛ inches. Of course there should be a bee space above, below, and at the ends of the frames. The size otherwise can be made for as many frames as you desire to use. 2. I like it resting on the hive only—a bee-space above the frames.—Eugene Secor.

1. The dimensions of my hives which use the generally adopted Langstroth size of frames—length 18⅞, depth 9⅞, and breadth 15⅛. This is inside measure, and will accommodate ten frames 17⅝x9⅛ inches, spaced 1½ inches from center to center. 2. On top of the hive.—J. M. Hambaugh.

1. There are many sizes and proportions for a Langstroth hive, and opinions vary very much. If I wanted to get the largest results in comb honey, I would use the wood-zinc queen-excluder, and an eight-frame hive of the length of the standard Langstroth, but the brood-frames should be only 7 inches deep. But it is not proper to use a queen-excluder, in working for comb honey, on an eight or ten frame Langstroth hive of the usual size. 2. On the top of the hive.—G. L. Tinker.

Take the Langstroth frame and make the hive deep enough to leave a bee-space of 5-16 of an inch on top of the frames, and long enough to leave 5-16 or ⅜ of an inch at each end; then it depends upon how you want to space the frames, and the number you wish to use, what width you will adopt. 2. I prefer them on the top of the hive, but it is possible I am wrong.—C. C. Miller.

The Langstroth hive should be 14¼ inches wide, and long enough to carry a frame that will hold four 4¼x4¼ sections; that is to say, the size of the "Simplicity." This will take ten frames. Some prefer a narrower hive, to take eight frames only. The proportion should be the same in the narrower hive.—J. E. Pond.

1. The Langstroth hive should never be made. Many improvements of it are better than the original. The inside dimensions of the Langstroth are—depth 10 inches, length 18¼ inches, and width 15 inches. These are *inside* measurements. 2. There was a bee-space between the frames and the "honey-board," and the super or boxes rested on the honey-board.—J. M. Snuck.

My undersized Langstroth hive is simply a well-made box, 14x18⅛ and 9½ inches deep, inside measure. This I call the "hive body." The hive body is rabbeted at the ends, so that the standard Langstroth frame, when in place, is adjusted in a central position in the hive body, having half the bee-space above, and half below the frames. These hive bodies are used for brood-chamber and for upper stories. A rimmed bottom-board is used that may be fastened on with clamps or not. I hardly ever fasten the bottoms. Section-cases are made the same size, but, of course, of proper depth for the sections. The queen-excluders have wood rims around them with half a bee-space on both sides. The whole is arranged so that one department will tier on a *square joint*, one on the other. The standard Langstroth frame is 17⅜x9⅛ inches. Nothing beats this arrangement.—G. W. Demaree.

1. The best that I have ever used for the standard Langstroth frame, eight in number, has an inside net dimension as follows: Ten inches deep, 11½ wide, 18⅛ long; outside measure, 10⅝ inches deep, 13 wide, and 19⅞ long. 2. Directly on top of the hive, never sliding over on the outside, nor on the inside the least bit. Avoid all that, as you would foul brood. The super should not rest on top of the frames. There should be a bee-space between the bottom surface of the super and the top of the frame. This bee-space should be in the top of the brood-chamber, and never anywhere else, under any circumstances.—James Heddon.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cts., postpaid.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

CORRESPONDENCE.

WIDE FRAMES.

Are they any Better than the T-Supers?

Written for the American Bee Journal
BY DR. C. C. MILLER.

On page 184, Mr. J. V. Caldwell discusses the matter so fairly that I take pleasure in replying to his challenge. I have a very kindly feeling toward the wide frame for the good it has done, and I assure you that I would not to-day have hundreds of them lying idle in my shop loft if I had not found something to take their place that has proven itself a good deal better. But that does not prove to *you* that they are better, friend Caldwell, only that I think so. You say that they have only one fault that you know of, the difficulty of taking out sections. That alone would not condemn them. It is a *very* difficult thing to get a *single* section out of a tight-fitting wide frame, but the whole frame can be emptied with comparative ease, especially if made as I think the best way. And let me say right here, that if I were to go back to wide frames again, I would have them one tier high, top-bar the same width as the bottom, and with a bee-space between the top of the section and the top-bar, as Mr. Oatman used them.

Now let us see your points. You think it no advantage that "any width of the 4¼ section can be used." I doubt if you know what you are talking about as well as I do. Some years ago I had the same season 4¼x4¼ sections of five different widths—had them by the hundred—so I *know*. Well, if you knew the trouble I had with those different widths, and how a few would lie over unfinished of each kind to torment me for two or three years, and how I finally burned some of them to get them out of the way, you would say more emphatically than ever, "I want just one size of sections." So I think we will shake hands on that.

But I cannot agree with you on the next point. When you want all the sections out of a super, it surely is an advantage to be able to take them all out in a lump. I hardly think that you mean it is not, but you mean that it is easier to take part out of a wide frame super than out of a T super. Well, that depends. I can take a single section out of a T super in less time than I can out of a wide frame super, but if the wide frame contains four sections (and I do not believe it is best to have more than four sections in a frame), and especially if there is a bee-space over the sections and under the top-bar, I can take the four sections out of the wide frame a good bit sooner than out of the T super. But it is a rare case that you want to take just the one frame out. Before the end sections of a frame are finished, the middle sections of the adjoining frame are finished.

As a general rule you do not want to take sections out of a super until the majority are finished, the corner sections and perhaps a few others are left unfinished. In that case, whether wide frame or T be used, you are likely to take out the whole affair, pick out the unfinished ones, and put them in another super to go back on the hive. Or with the T super you can *easily*, with the proper machine, push the sections all out except about one-fourth of an inch or so of the bottoms of the sections, pick off the unfinished ones, and then let the finished ones all slide right back again into their old super. Taken altogether, I think the convenience of taking out part or all the sections, as desired, is very much in favor of the T super.

"The T super contains too many loose pieces." A fair criticism, but it is hardly fair to say "while the wide frame is compact, and has no loose pieces whatever," for you are not to compare the T super with a single wide frame, but with a super of wide frames. In a T super of 24 sections, there are five separators and three T tins—eight loose pieces. In a wide-frame super of the same capacity, there are six wide frames, or six loose pieces, for each frame is a loose piece just as much as each T tin is a loose piece. So the T super has a third more loose pieces than the wide frame super, and I think the T tins are a little more troublesome as loose pieces.

"The wide frame also protects the sections on all sides from the bees, and to accomplish the same result with the T supers, a lot of pieces must be laid on the top and the bottom of the sections." You are surely laboring under a misapprehension. I would not put a lot of loose pieces on the top and bottom of the sections, because there is less propolis on a section in a T super than in a wide frame. The bees thrust glue in between the top-bar and the section as also at the bottom, and they put very little glue on a plane surface to which they have free access.

In addition to the matters mentioned I may say that the wide-frame super is more expensive. That, however, did not weigh with me, for I had the wide frames, and it was more expensive to change. The wide frame super is longer and deeper, so it takes up more room, and it weighs more. I have wide frames for sale, but no T supers.

Marengo, Ills.

SELF-HIVERS.

Proposed Experiments with Self-Hiving Arrangements.

Written for the American Bee Journal
BY W. HARMER.

I will begin by asking a conundrum, viz: Why is *La Grippe* like the self-hiver? My answer is, Because it has come into existence in different parts of the country at the same time. But I hope that the self-hiver will stay longer than *La Grippe*. I think that it will, as there is much need of it.

I have already thought out the same plan as described in Mr. Sawyer's article on page 183, who asks for the views of some practical bee-keeper. I claim to be one, as by it I get my bread and butter. I have kept bees about twenty years, and have had in that time a great deal of experience with them, as I was intensely interested in their work, and longed to be able to make a special study of their habits and methods of work; this longing is about to be realized, as I commence this season with nothing else in view as an occupation.

About three years ago, as I was working my bees for extracted honey, I found that where I had lifted the most of the brood into the upper story of a colony, and shut the queen below, they were not inclined to swarm, and in nearly every instance they had in due time a young queen in the super, which I made use of by carrying all the bees to a new stand. I was satisfied that if I had cut a little hole in the top story, I could have had two fertile queens in the one hive, or two complete colonies living together. Here I saw food for thought, and also a great benefit to be derived from experimenting along this line, but I always had "too many irons in the fire" (poultry, small fruit-growing, etc.) until now; but the experiments have been going on just about the same, and Mr. Doolittle has come out "on top of the heap." If you don't believe it, just read his book.

I will now give my views of Mr. Sawyer's plan, by describing my plan, which I have decided to try the coming season. It is as follows:

Cut (by measurement or pattern) before the hives are put together, a 1½ or 2 inch hole in the sides of the hives; place two hives on one stand, side by side, one facing east and the other west; then before swarming commences, prepare the empty ones of each pair with frames of foundation or empty combs. I see no need of a queen-excluder between the hives, as I would allow the old queen with clipped wing to occupy the new home, which I am pretty sure she will do, as soon as they begin to be the least crowded for room. This, I believe, would be better than Mr. Sawyer's way of having the queen-cells mature in the new hive.

I do not know that there is a necessity for a queen-excluder even after the old queen has taken up her new quarters. I have strong grounds for believing it unnecessary, as I believe that a great many queens can occupy the same house or hive (if it is large enough) with easy access to each other's quarters—in fact, I make the assertion that it is so, and I will give my reasons for so saying, in another article. I think that this subject has a great deal to do with bee-keeping in the near future, and one that needs experimenting.

Mr. Sawyer asks how to use this plan when wanting no increase. It seems to me that here is where there will be a benefit, as the two colonies are already united, and all that needs to be done is to save the best queen by killing the worst, or taking all the combs out of one hive in the fall, letting all the bees and queen run on the combs of the adjoining hive, and allowing Nature to take its course, especially if both queens are good, and the bee-keeper has no use or sale for her. What do bee-keepers say to this? "Let your light so shine," etc.

Manistee, Mich.

BEE-ESCAPE.

A Diamond-Shaped One—Latest Simple Arrangement.

Written for the American Bee Journal

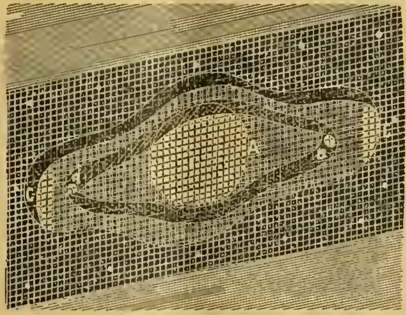
BY JOHN S. REESE.

The growing demand for bee-escapes, and information how to make and use them, has induced me to make models of quite a number of shapes. Mr. C. H. Dibbern claims the introduction of the horizontal arrangement, under a hole in a board and in the bee-space, and I have one of his models. It is good of the kind, but I will proceed with mine.

The accompanying illustration will clearly show a very simple and easily-made arrangement within the board and flush with both sides, that would not seem to need more describing.

We will take for granted that a board ⅜ to ⅝ of an inch thick will make a good inner cover, and such boards are accessible to almost every one. These boards should be made of such size, and bee-spaces to suit the hives used. In the center of the escape-board make a point with a scribe-awl, in which to start your bit. Just two inches from this center-point, and on each side of it on a line the long way of the board, make two more points. Now bore one 3-inch hole in the centre, and one 1¾-inch hole on each side; a scroll-saw will cut this hole nicely. These holes will make an opening to receive the escape, which is made as follows:

One piece of wire-cloth 4 inches wide and 7 inches long, with a 1¾-inch hole in the center for the top side. One piece of wire-cloth 4 inches wide and 5⅝ inches long for the under side. The narrow strip of wire-cloth that forms the cone, and goes between the top and bottom pieces, should be just a fraction wider than the board is thick, and 11 inches long. This strip is put into proper shape by bending it around a little block of wood, made diamond shaped, 4½ inches long and 2⅛ inches wide, the points being made round and blunt.



Reese's New Bee-Escape.

It will be found best to make the lap and join the ends on the side of the diamond, and cut the exit holes in each end of the diamond cone strip (B B) with a pair of pointed scissors. The cone-strip should be attached to the top-piece, which has the hole in it, with short pieces of wire, and then adjusted in the board and tacked to it. The under piece should next be tacked on in such a manner as to allow an exit at each end, as shown in the cut at C C. This very simple arrangement forms a double cone or barrier, and the expense of material and time to make it is scarcely worth computing.

To make the 1¾-inch hole in the top piece or the wire-cloth, take two pieces of ⅜-inch board the same size as the wire-cloth; bore a 1¾-inch hole in the center of each, and place the wire-cloth between, clamp together, and cut out the wire-cloth in the hole with a pen-knife. This can all be done in less time than it takes to write it. The engraving shows the top of the escape.

Please bear in mind that this pattern of a bee-escape has not had a practical test during a honey-flow, but has every indication of being a perfect success. Any pattern of a bee-escape will work to perfection under feeders, cleaning out extracting combs or sections, etc. This unusual excitement does not exist when an escape is used during a honey-flow, when we want to take off full cases (extracting or sections), and lead the working force automatically down into an empty super or brood-chamber.

This escape-board can be used as an inner cover by simply placing a thin board or piece of tin over the escape, and if the bees should daub it up with propolis, hold the escape over a heat (a lamp or a few shavings on fire), when it can all be jarred off at one lick.

Winchester, Ky.

DEADLY SPRAY.

The Spraying of Fruit-Trees—Plant-Curculio, etc.

Written for the American Bee Journal

BY L. F. ABBOTT.

In the AMERICAN BEE JOURNAL for March 15, in reply to Mr. R. G. Robertson, of Marshall, Mo., regarding the spraying of fruit-trees for the destruction of various larvæ which prey upon the fruit, the question is asked: "Why use poison at all?" And then this valuable information is cited: Mr. Peter Brickey gave last year regarding the curculio, and a method of preventing their depredations.

In the first place, was what Mr. Brickey says true (which it is not) of the curculio, that they crawl up the trunk of the tree which they infest, the method which he gives would not signify in preventing the ravages of the great enemy of orchard fruits—the larvæ of the codling-moth. There need be no trouble nor apprehension of disaster to bees by spraying of fruit-trees, if we will take the trouble to go about the business understandingly, and in a common-sense manner.

First, let us understand the habits of the insects we wish to combat. The great enemy of the apple-orchard is the codling-moth larvæ. These are propagated by a little miller which appears at intervals through the summer, and deposits its eggs in the blossom-end of the apple. Its appearance in early summer is governed by the season; but it may be confidently expected when the apples are just set, and the blossoms have entirely dried up. The codling-moth flies at night, and visits the small apples—never the flowers—and deposits one egg only in the calyx of the embryo fruit. In a few days the eggs hatch, and the little worm—the merest mite—commences to eat its way into the fruit.

Spraying the tree with the poisoned water even as soon as the eggs of the moth are laid, if no rain intervenes, will prove efficacious in destroying the larvæ, as at this stage of the growth of the fruit, the calyx is upward, and offers the best possible means of destroying the worms, as the liquid applied with a fine spraying nozzle—and no other should be used—is sure to drop into the upturned cup of the fruit, so when the worms commence to eat, it is to their death.

To be most effectual, the spraying should be done once in ten days after the first application until the fruit tips and turns the calyx down. The first brood of worms which infest the apples before they turn downwards, proves by far the most destructive. However, later spraying of the trees to destroy a second brood of worms, which, probably appear in Missouri, say in July and the first of August, would undoubtedly destroy many of these later larvæ, and I should certainly recommend its trial.

Great care should be exercised in mixing the poison, not to get it too strong, and thus injure the foliage. A *pure* article of Paris-green or London purple, using one pound to 200 gallons of water, is of sufficient strength. In using Paris-green, means should be used to keep the water thoroughly agitated while applying, as the poison is not dissolved by water, but only held in suspension, and quickly settles to the bottom of the vessel, if not stirred. With the common brands of the article as usually bought for killing of potato-bugs, 150 to 175 gallons of water to the pound may be safely used.

THE CURCULIO.

The plum curculio is a very different insect from the codling-moth. The latter *Carpocapsa pomanella* belongs to the order of *Lepidoptera*, which includes all the butterflies and moths. The curculio is one of the snout beetles, order Caleoptera, genus *Conotrachelus nenuphar* Herbst, and is not dependent by any means upon his legs alone for means to get at the young fruit of the plum-trees, which it punctures and deposits an egg therein; in fact, it is doubtful if these little beetles ever crawl up the trunks of the trees they infest at all; the wings forming a much more speedy and effectual means of accomplishing their object. Hence, Mr. Brickey's kerosene-saturated bands are entirely useless for the purpose of preventing the ravages of the curculio.

There are certain caterpillars, and the female of the canker-worm moth, which is wingless, which might be partially hindered from ascending the trees by such bands, but they would need to be quite broad and frequently saturated with kerosene at the risk of injuring the trees.

In no case do the beetles infest the flowers to their damage, nor would it be of the slightest use to spray the fruit trees while the blossoms in any stage remained. It is after the fruit sets that these little snout beetles begin to sting the plums. It first makes a small, crescent-shaped incision, with its snout, in the skin of the plum, then, turning around, inserts an egg in the wound.

These insects begin their depredations as soon as the fruit is set, and continue until the middle or last of July. Thus it would seem to be necessary to spray the fruit at intervals from the time it sets until the latter period, which, in fairly dry seasons, might be three or four times.

From the foregoing, it will be seen that it is worse than useless to spray the trees of either orchard or garden fruits while the blossoms are yet seen; and, also, that the insect most damaging to the apple crop and the curculio, are very distinct species, although the latter does frequently infest the apple to some extent.

Lewiston, Maine.

* * *

SUPERS.

Super Question, and Suggestions Concerning It.

Written for the American Bee Journal

BY M. M. BALDRIDGE.

The following interesting letter is from a Wisconsin bee-keeper of 32 years experience, and an expert in the production of comb honey:

"In regard to supers, this has been a topic of much thought and study with me, and yet I am as much in the dark as ever. As you say, we need a super that will hold the sections close together, and expose as little as possible of their outside surface to the bees.

"I have tried the old style Heddon super, and use it some now. My objection to it is, that the bees glue in the sections at times so tight as to injure the honey to remove them. I got the **T** super of Dr. Miller, and discarded that after one year's trial. When one section is out, the others are liable to tumble out. I sent also to Frank Eaton for one of his supers. This has slats on the bottom, and the same shape as the open-sided section, on which the section rests. It has also a drop-leaf side. I have sold all the supers on this plan but one.

"I aim to have as little machinery about my apiary as possible, and, therefore, I do not like the wide-frame supers, nor the separators. By using sections seven to the foot, I seldom have any bulged ones, even without separators. I want a super that will permit me to take out any section from the outside and place it in the middle, and *vice versa*, in case I so desire.

"Geo. E. Hilton makes a **T** super with the tins stationary, in which, on one side, is a follower, and by means of two thumb-screws the sections are pressed sidewise close together. This super can be turned upside down, and the sections will remain in place, but by a slight turn of the thumb-screws the sections will drop down ⅜ of an inch, and then the super may be lifted upward and removed. But here comes the trouble with propolis. As the **T** tins separate the rows of sections a trifle, the bees will fill the openings with propolis unless another set of tins is used on top also. But I have sent for one of these supers, and shall give it a thorough trial, if I live long enough.

"Very few bee-keepers have given the super question the proper attention it deserves. The subject is by no means exhausted.

"As a rule, I sell my comb honey here at home, cash down, to a commission man, at 15 cents per pound; put up in crates holding 28 sections each. My extracted honey I sell at 12½ cents per pound, in lots of from 12 to 50 pounds, to my customers here.

"I have used the different kinds of sections, but prefer the 4-piece dovetailed. I glue the corners usually, but it is a deal of work. I can arrange the 4-piece sections so that they will remain perfectly square. My objection to the one-piece is, that it is seldom square when folded—being diamond in shape."

The foregoing shows that the super question is by no means settled, and that others, aside from myself, are on the hunt for something better than what we have been using. And that what we want will yet be found there is no doubt whatever; for the necessity will secure it, she still being as much the "mother of invention" as she ever was. The super I want, and must have, is one that will keep the sections in close contact with each other, both endwise and sidewise, and which will enable me to secure the outer surface of the tops and bottoms, as well as the sides, when filled with honey, as clean and bright as when first given to the bees. And we must be able to do this without the use of wide frames, so as to save their expense. We want, however, an arrangement that will also enable us to use separators or to dispense with them at will. Who will come to the rescue ?

My correspondent incidentally refers to his plan of selling his crop of honey. It pleases me to learn that he makes the commission man buy his crop outright, and to pay cash for it before it leaves his apiary ! This is right, and is precisely what every bee-keeper should do. If all would do this, the wholesale dealer would then take an interest in getting his money back as well as a living profit besides, and this would be one of the means of keeping the price up where it should be.

St. Charles, Ills.

SWARM-HIVERS.

How Colonies are Managed When They are Used.

Written for the American Bee Journal

BY WESLEY DIBBLE.

I am in receipt of numerous letters asking for replies to questions in relation to my article on page 72. As the matters are of importance to many others, I would like to answer them in the AMERICAN BEE JOURNAL.

My experiments with my plan of hiving swarms, leads to narrow entrances and wide entrances of hives, queen-excluders on the outside, and queen-excluders on the inside of the hive-entrances. The former is a complete failure, while the latter is a partial success, and then only when the entrance is clear across the hive.

With a narrow entrance, there is a dark space between the entrance of the hive and the entrance of the tunnel, that the queen will seldom pass over. The entrance must go clear across the hive.

I recommend the queen-excluding honey-board in preference to the queen-excluder on the entrance of the hives. If, however, the metal is used on the hives, it must be on the inside so as to keep the queen back, even with the entrance of the tunnel. As the queen goes back and forward, endeavoring to get out, she will march through the tunnel.

My experiments also lead to using screen-wire, and also queen-excluders for the tunnel that connects the two hives. I advise all not to hesitate to use the wire-cloth in the absence of the queen-excluding metal, as I can see no difference in results between them. I will add here (but not positively), that there is no need of putting the *cone* in the tunnel.

I think that Mr. Alley has said that after a swarm has issued, and the queen has strayed under the bottom of the stand—after the bees find her, they will cluster with her, and not leave her for the old hive.

I partially agree with Mr. Alley ; but even though the bees return to the old hive when swarming, it is soon conveyed from one bee to another, that the queen is through the tunnel, and they will march through it and cluster with the queen in the next hive.

I can answer several questions by telling how I proceed further on. The hive prepared for the swarm has either half-inch starters of foundation, and confined to six frames, or the same six frames with full sheets of foundation. Then comes the sections, with a queen-excluder between the two. After the swarm has issued 24 hours, or on the next day, exchange the hives, always leaving the surplus case with the new swarm.

To prevent swarms, from four to six days remove, in the middle of the day (when the bees are well in the field), the old colony to a new and permanent location. If, however, the weather is bad, not allowing the bees in the field, shake or brush the frames, and leave the bees on the old stand. A little good judgment will tell how many to leave, and not rob the old colony that is removed.

After removing the old hive, you may introduce a laying queen, a virgin queen, or a ripe queen-cell, or leave them to rear a queen of their own. In either case, I think that you will not be bothered with after-swarms.

I am aware that among practical bee-keepers, there is a diversity of opinion, and upon all subjects they disagree.

HONEY.

Production, Care and Sale when Extracted from the Comb.

Written for the American Bee Journal

BY JAMES HEDDON.

I was so very busy with my many duties about the time you offered prizes for the three best articles on the production, care and sale (I think it was) of extracted honey, that I never saw the offer and rules given until it was too late for me to compete.

It strikes me that the specialist of the future will be compelled to use a hive and system of management adapted thereto, with which he can manipulate his colonies and surplus cases very rapidly, and with but little exposure to robbers at a time of year when they are about. He will also need an arrangement or system of manipulation which greatly discourages, or entirely prevents, natural swarming. This he must have, because he must keep more than one apiary, and he must not go to the expense of keeping a man in every one, unless his apiaries contain a large number of colonies, which may be practical in some localities, but not in all.

In coming to the consideration of the special production of extracted honey, let me call attention to one point which I consider the greatest of all in comparing the production of comb with that of extracted honey. Although the sections had to be bought, pounded together, filled with foundation, placed in the case, and after being filled must be removed, scraped and placed in the shipping-crates, all this labor, most of which the production of extracted honey does not involve, is all made up, if not more than counterbalanced, by the fact that the sections could be put together, the foundation put in, all adjusted in the storing case, all taken out of the case after being filled, scraped, put into shipping-crates ready for market *by boys and girls, all in doors*, at different times of the year, and by persons who could not tell a queen-bee from a mud-wasp ; whereas, in the production of extracted honey, the services of an apiarist were necessary, and he had to work in the sun among robbers apart of the time, subjecting himself to occasional stings, etc.

This is about the way extracted honey is produced now-a-days, but it is not the way we are managing at present. We use shallow brood-cases with securely fixed frames, containing eight straight combs. We put them on with a single motion, and we alternate and tier them up so quickly robbers cannot get a taste ; and by this tiering up plan we get most perfectly ripened honey without letting but little of it be capped over. Here we save labor and material for the bees, and much labor for ourselves. We remove them from the hive by the case, the same as we do with comb honey ; we shake and tremble nearly all of the bees out of these cases, the same as with a comb-honey case, and then stand them up in our screen-house until the few remaining ones desert, just as we do with comb honey ; then wheel the cases to the honey-house, invert them on a table, loosen the screws, lift the case away from the shallow frames with a motion, leaving the frames upon the table, all ready to be handled. These we uncap, extract in an automatic extractor with four comb-baskets, each basket being a little larger than is required to hold a Langstroth frame, and just large enough to easily take two of the shallow frames of my case; consequently we empty eight frames, or just one case at a time. We do not have to touch the combs, or the comb-baskets, in order to reverse, in throwing the honey from both sides of the combs.

This method makes the production of extracted honey easier, simpler, safer, and surer than that of comb honey, and in many places more profitable. This article is long enough, so I will postpone to a future time what I wish to say regarding the care and sale of extracted honey.

Dowagiac, Mich.

BEES BY MAIL.

The Rights of Bee-Keepers Under the Law.

Written for the American Bee Journal

BY C. J. ROBINSON.

With surprise and solicitude I read the remarks of Mr. T. F. Bingham, on page 758 of the BEE JOURNAL for 1889, relating to mailing bees. He is well-known as an apiarist, and well qualified to discuss matters pertaining to bees and bee-keeping, but he does not "fill the bill" as a erudite jurist, yet he usurps the throne of justice and adjudicates, off-hand, "the meaning of the law," and insists that *his* version is the end thereof.

With due respect for individual opinions—I feel that in this case I am justified; yea, in duty bound, to take exception to Mr. Bingham assuming the whole realm of opinion, not allowing room for a back-seat for others.

As a fourth-class P. M., Mr. Bingham holds that bees are *not* mailable matter, except in limited numbers, to agree with *his* notion of law. However, the construction *he* puts on the language of the eighth sub-division of Sec. 372 of the Mail Code, is not authority nor common sense in a legal point of view. Neither Mr. Bingham nor myself are competent to decide as to what the codifiers of the last Mail Code had in view when they formed the eighth sub-division of that section which reads: "Queen-bees and their attendant bees may be sent in the mails when properly put up, so as not to injure the persons of those handling the mails, nor soil the mail-bags or their contents." As to the intent and meaning of the codifiers of the said code, we, the laity, are not called upon, not competent to decide.

The Postmaster General has discretionary jurisdiction, so far as to construe the meaning of the language of the code, but his ruling is subject to appeal and review by the United States courts. It is very probable the codifiers aimed to so phrase that subdivision that great scope might be given its meaning.

From August, 1863, when I mailed the first queen and attendant bees that were ever shipped by mail transit, until March, 1866, there was no provision of law mentioning bees as mail matter, yet if Mr. Henry Alley is good authority, bees have been shipped in the mails each year from the beginning of 1863; and that, too, notwithstanding the Post-Office Department, by special order, prohibited the mailing of bees.

In May, 1873, Hon. B. F. Butler, while a member of Congress, interviewed the Postmaster General with a view of getting the order revoked, but Benjamin was informed that he, the Postmaster, "does not deem it advisable to reverse or modify the former decision." (See the AMERICAN BEE JOURNAL for 1873, page 110).

I mentioned hypothetically, that the language of the law referred to might be construed to include four or five million attendant bees, providing the package did not exceed four pounds. In answer to my opinion thus expressed, Mr. Bingham, with the air of a "court of last resort," declares, unqualifiedly, that the meaning of the law is otherwise—that is, a pound of bees is not mailable matter, and he gives notice that he, "as a Postmaster, should not accept a package of worker-bees as a queen-bee and her attendants, but should regard it as unsafe and not within the meaning of the law, and should refer the matter to the Postal Department at Washington."

Refer what matter? A package of bees is handed to him as mail matter, and postage paid or tendered. Then what is the Postmaster's duty in the case? He should examine the package critically—is not required to count the bees nor measure the package, but estimate or weigh the whole, and his most important official duty is to examine and assure himself that the bees are "securely and properly put up so as not to do injury," as the law directs. To see that the cages are reasonably secure from accident, is all that is incumbent on Postmasters in their discretion.

If a Postmaster should find that a cage of bees which is offered him to mail were not properly put up, he ought to exclude the package—refuse to mail it. But if the cage, on examination, appears to be securely formed and closed to hold the bees in transit—none more competent to decide than T. F. Bingham—then he would not be justified in refusing to mail nor holding to "refer the matter," but in his refusal or holding, he would be liable for damages sustained by the party offering the package, in an action in the local courts. Suppose a bundle of one thousand, more or less, of queen-bees and their attendants, were handed to Mr. Bingham as mail matter. The bees, all of them, are in one bundle, which weighs less than four pounds, and postage paid. He examines the cage (externally of course), and it appears to be substantial, the bees being properly put up. He considers, "Now I have an old-fashioned notion that it is not the 'meaning of the law,' that so many bees can be mailed in one 'bundle.' No, I will not 'accept' them. I will 'refer the matter to the Department.'" How does that strike men of practical sense?

Mr. Bingham, including certain others, express momentous fear in the matter—fear that Messrs. Pratt, Doolittle and Robinson will, in the course of human events, turn things upside down—they will "let loose a pound of worker-bees in the mail cars, or pouches, or post-office," and then everybody would be so crazy that bees would be excluded from the mails—such apprehension is so unreasonable that but few take stock in it.

They fear that the Postmaster General will be so unwise in case an "accident occurs," as to repeal Sec. 372, or the eighth sub-division. Why not trust Congress to act in the matter? That body ought to be as wise as ourselves.

The "danger" does not lie in the inattention of shippers, nor the probability that accidents might occur. The danger lies in the fact that Postmasters will fail to do their duty; will not see that cages containing bees are securely fitted; will not see that bees are properly put up for mailing. The inefficient Postmasters are the only source of danger, because they generally fail to do that which the law requires them to do, viz: see that the bees, when offered, are properly put up. Who believes or suspects that Messrs. Doolittle or Pratt would offer a package of bees as mail matter unless they were secure from accident? If all shippers of bees put them up as secure as does that hero, Mr. Frank Benton, no rackets would occur. He sends bees in the mails safely from the Alps to South America and to Oregon.

Late in the fall of 1888, I was expecting queens by mail. One day when the mail arrived, I stepped into the Post-office, and when the pouch was emptied, the Postmaster and some of his clerks cried out: "Robinson come here, your bees are swarming." I found one queen crawling into a letter-box, and I secured all of the bees in a moment, while the postal force stood back, laughing and joking. There were two cages like Mr. Benton's not covered with boards, but paper put over each and clapped together, and must have been slovenly tied. Both cages were wound with twine, such as postal clerks are provided with. Some postal clerk had fixed the cages, and perhaps had been stung, but no harm resulted, only the queens died soon after. The shipper deserved, by reason of his failing to properly put up the bees, a lecture, and the Postmaster ought to have been censured for not refusing to mail the bundle.

Mr. Bingham argues that it is all-important that we be favored with mail transit for queen-bees; but bees by the 1-pound or ½-pound can be, and should be shipped by express. I confess I am too stupid to see why or how the mails can be of so great benefit in transmitting a very few bees, and not of like benefit in transmitting a ½-pound, or one or more pounds. True, the express can do the whole business of transmitting bees, as was the case up to my mailing the first queen, and Father Langstroth adopted my plan, and he instituted the business of sending bees by mail before any other queen-breeder got there.

Several years ago, Mr. Ambrozic, of Austria, shipped hives of bees, full size, by mail to New York harbor, and the express took the hives, bees and all from thence to the consignees. The mail charges were nothing compared with express rates. Success to shippers of bees in packages of less than four pounds by mail transit.

Richford, N. Y.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Honey-Drinks—Wintering Well.

I have just been looking over some old copies of the American Bee Journal, and in one of them I saw this query: "Please describe a good method of making mead, metheglin, and any other desirable drinks, with honey as main ingredient;" and I felt as though I should like to tell my brother bee-keepers how proud I felt of them when I read the answers they gave, for nearly all of them were thus: "We are cold-water people;" or "Cold water is the best drink I know of." I, too, think it is wrong to make intoxicating drinks out of an article so pure and good as honey.

I have just returned from my visit in southern Minnesota, to my summer home, in order to be fully prepared for my summer work. Since my return, my brother-in-law (Mr. Wm. Lossing) and I have looked through all the colonies in the cellar, and found them wintering very nicely. I wish to thank the editor for his kind words on page 163. Miss Ida House.

Moward Lake, Minn., March 19, 1890.

Bees in Good Condition.

Bees did well here last season. I commenced in the spring with 31 colonies, and increased them to 70, by natural swarming. I placed them in the cellar the last of December, and took them out about Feb. 15. I lost one colony, but the others are in good condition. I took off 2,500 pounds of extracted honey, and 500 pounds of comb honey, in 1889. My son, Osa, and I, have purchased the entire stock of bees (149 colonies) and bee-keeping utensils of J. E. Hunter, making in all an apiary of 218 colonies. T. J. Baldwin.

Wyoming, Iowa, March 21, 1890.

Mild Winter in Maine.

I think that bees have wintered well in this part of the country. We have had a remarkable winter—there has not been more than a week at a time but wagons have been in here—something very unusual. The temperature has averaged very mild. In about four weeks—April 20—we may expect the bees to be humming, and gathering pollen from the willows and alders. I do not look for much "bee-weather" before that time, in this latitude, as usually an open winter "lingers in the lap of spring." L. F. Abbott.

Lewiston, Me., March 22, 1890.

A Comb-Honey Case.

I have been an interested reader of the merits and demerits of comb honey supers. Like J. V. Caldwell (see page 184), I want but one size of sections in my apiary. I cannot champion the old wide frame, as he seems to want some to do; neither do I like the T super—in fact, I have discarded all of the numerous kinds of comb honey supers, except the new case with a wide frame which I invented. I will send the Bee Journal office a sample of the frame. There is an unobstructed passage from one end to the other of the case, entirely doing away with the necessity of the four-side bee-entrance section; or any section with insets. It also enables the bees to build their combs flush with the front side of the section, while at the side next to the separator there will be a bee-space, which is a great advantage in crating for market.

Chas. R. Isham, on page 167, says: "By practicing what is called 'cleating the separator,' sections without any insets can be used, and filled with comb flush to the edges all around. In no other way can this be accomplished only by using board separators about ¼ of an inch thick." I accomplished this very desirable result (of having the sections filled to the edge) with this wide frame, which I have been using for five years. It can be made with a projecting top-bar to hang in the hive, or reversible, like the same sent, as may be desired.

Lyons, Wis. F. W. Travis.

[The greatest objection we have to the Case described by Mr. Travis, is the fact that it requires sections specially made for it, 1¾ inches wide without entrance insets. The nearer we can come to using the same sections, frames, etc., the better.—Ed.]

Drones Flying—Getting Pollen.

To-day all was merry in my bee-yard; 2 colonies had drones flying as freely as in June. How is that for northern Ohio—noisy drones flying on March 21? Tally one more for chaff hives. My 44 colonies have come through the winter in good condition, and all seem to be strong, excepting 2 colonies that are affected with the "nameless bee-disease." One colony, and its swarm that I hived on Sept. 4, 1889, were both bringing in pollen to-day. The parent colony reared its own queen last September. F. J. Krumm.

Pleasant Bend, O., March 21, 1890.

Success in Bee-Keeping at Last.

I have been trying to keep bees for the last eighteen years, and met with nothing but failure until last year. I then read the American Bee Journal, and met with some success. I commenced last spring with one good colony and one queenless colony in a box-hive; I now have 5 colonies in Langstroth hives, and 2 in box-hives, and took over 300 pounds of honey in one-pound sections. My bees are in fine condition. Lee Powelson.

Batavia, Iowa, March 22, 1890.

An Early Bumble-Bee.

A few days ago, while working in the woods, I dug up a bumble-bee. Being surprised at seeing a bumble-bee in the middle of March, I made a careful examination of it. It was lying on its back, with its head downward, in an oblong hole or cell about twice as large as the bee itself. This cell was perfectly solid, having ao outlet. It was not lined, and the bee lay next to the dirt. The cell was located near the root of a hickory tree, about four inches below the surface of the ground, which was covered with leaves, and frozen hard. When first seen, the only evidence of life in the bee was a slight movement of the legs. I took it in my hands and blew my breath upon it for some time, but could not make it able to walk. It had a sad and forlorn appearance. Around its body, or in the indentation around its waist were several small brown lice, all of which were lively. My greatest curiosity is to understand how this poor bee survived a cold winter in this icy and desolate cell without any food. Is a bumble-bee warm blooded? If Prof. Cook will kindly answer this, I shall feel greatly obliged.

F. B. Parker.

St. Joseph, Mo., March 24, 1890.

[This is nothing new or strange. The queen bumble-bee lives over winter in some cell or crevice. She truly hibernates, as she eats not and moves not. Many insects are infested by lice and mites. I have had ten students studying in my laboratory all winter during our long three-months' vacation. It has been so warm that they have been able to collect most of the time. They got their insects in the earth, rotten-wood, and under leaves. Many of the insects harbored vermin, lice or mites.—A. J. Cook.]

◆

Results of the Last Season.

I commenced the season of 1889 with 47 colonies, and increased them to 70, which are all in good condition now. They are packed in chaff on the summer stands. I took 2,900 pounds of comb honey in one-pound sections, and 250 pounds of extracted honey, last year. A. W. Fisher.

Ganges, Mich., March 24, 1890.

◆

Unfavorable Weather.

The American Bee Journal comes to me regularly, and I am much pleased with it—in fact, I would not be without it for many times its cost. The month of March has been bad for the bees—rainy and stormy, with no prospect of fair weather yet. My colonies are yet strong in bees, but if the unfavorable weather continues much longer, I am fearful that our honey crop, which is never very large in this locality, will be quite small, as our best honey-flow commences early in April. J. L. Guthrie.

Juliet, Miss., March 22, 1890.

◆

Transferring—Alsike Clover.

An Illinois lady writes to know how to transfer bees from an old-fashioned "Palace bee-hive" to frame hives; also, how to divide the bees, as there are enough for three strong colonies; and what to do with the bees when fastening the pieces of combs in the frames. I would smoke and drive the bees into some box, to have them out of the way; and after the combs are transferred and divided as wanted, I would introduce queens to the two queenless colonies at once, if the queens are handy, and if there are no queens to be used, give ripe queen-cells two days later, which can be had at swarming time. As soon as the transferring is done, the bees in the box are to be divided among the 3 colonies, and allowed to run in at the entrance.

As the time of the year for sowing clover will soon be at hand, I will give my experience with it. I have been sowing Alsike in a small way for the last three years, and am well pleased with it. When I sow for hay, I have about ⅓ Alsike and ⅔ red clover, which makes a very nice quality of hay. I think that it is not necessary to mix the seed one half, as the Alsike is very fine, and goes a great ways when sowed, which does not make it such a dear seed, after all. Now as the basswood trees are mostly cut down for logs and other uses, bee-keepers ought to provide as much Alsike clover and buckwheat pasture for the bees as possible—the more the better, if we are keeping bees for profit; but if we are keeping bees for fun only, we can build up a large apiary in almost any farming country. As for myself, I keep bees for the money there is in the business, as well as pleasure.

The bees had a fine flight to-day, and carried in a lot of flour that I give for pollen. There were also plenty of bright, young bees taking their first flight in front of the strongest colonies, which are indications of rapid breeding. With a few exceptions, the bees have come though so far in fine condition. C. A. Bunch.

Nye, Ind., March 20, 1890.

◆

Preparing for a Good Season.

My bees are wintering thus far without loss. I increased, last season, from 37 to 73 colonies, and took 1,600 pounds of white honey, for which I received 15 cents per pound in my home market. I am preparing for a good year. I have my hives nearly finished for doubling my apiary the coming season. L. D. O'Dell.

Protection, N. Y., March 26, 1890.

◆

Cast Skins of the Bacon-Beetle.

I send you a small box containing a piece of comb cut from some brood-frame combs which I purchased from a neighbor who has lost nearly all his bees (about 80 colonies). You will find in the comb shells of a worm covered with long hairs like webs, which would seem to me to be proof against an attack by bees. The worm hatches under a web, and then coats itself with a web (the same as the wax-moth). I think it lives on the brood. Will Prof. Cook please state in the Bee Journal what it is?

Niles, Mich. Chas. B. Fritts.

[The cast skins are of the larva or grub of the bacon-beetle — *Dermestes lardarius*. This beetle is described and illustrated in my last edition of the "Bee-Keepers' Guide," on page 414. As I state there, I do not think that it feeds on anything but the dead bees. It is a serious pest in Museums, and especially in insect cabinets. I have never seen these about combs, except when they were stored with dead bees or brood in them. They may gnaw the comb to get to the bees.—A. J. Cook.]

◆

Mice in Bee-Cellars, etc.

When putting bees into the cellar for winter, I will give the plan I use to keep the mice from the bees, viz: I first put posts in the bottom of the bee-house, or cellar, so that when in place they are about 18 inches or 2 feet above the bottom of the cellar. Then put on top of the posts old joints of stove-pipe, cut open and pressed out flat, or sheets of tin 1½ feet or 2 feet broad, so that if mice do climb up the posts, they cannot get up over the edges of the metal sheets. Then I take a good, one-inch board, as wide as I can find, and lay it on top of the posts over the metal sheets, keeping the board as far from the walls of the cellar as I think necessary, so that the mice cannot get on it. I then put the hives on, and I take poison of some kind that will be sure to kill if mice eat it, and mix it with corn-meal or flour, and put it into pans on the bottom of the cellar, so that if mice or rats do get into the cellar, they will be very apt to get some of the poison.

I would like to ask a question, viz: If the drone and queen trap is used on hives to catch the queen, will it not hinder the workers from carrying in pollen, as the perforations seem too small to admit of the bees getting the loads of pollen through? I have never used the traps, and would like to know. D. B. Cassady.

Litchfield, Minn.

[We refer this question to Mr. Alley, for answer.—Ed.]

◆

Early Pollen.

Our bees were never in better condition at this season of the year. It is not very different from what it was last September. We have Italians that are ahead of any strain of Itaiian bees in the world. They are just such a colony of bees as we have tried for nearly 30 years to develop. They possess every desirable quality that even the most timid person could desire. This colony carried in pollen from the pussy-willow on March 13; three days earlier than I ever before knew it to be done here in New England. Henry Alley.

Wenham, Mass.

HONEY AND BEESWAX MARKET.

MILWAUKEE, March 13.—The demand for honey is very good, and the supply is fair. We quote: White 1-lbs., 12@13c—and if absolutely perfect, sometimes 14c.; choice, white 2-lbs., 12@12½c.; dark 1-lbs., 10@11c.; old 1-lbs., 8@9c. Extracted, white, in barrels and half-barrels, 7½@8c.; in pails and tin, 8@8½c.; dark, in barrels and half-barrels, 6@6½c. Beeswax, 22@25c.

A. V. BISHOP, 142 W. Water St.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Mar. 13.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

BOSTON, March 22.—Fancy 1-lbs., 16c. Anything off-grade sells considerably below 16c. The market is bare of fancy, 1-lb. white honey. Extracted, 7½@8½c. No beeswax on hand.

BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

NEW YORK, March 22.—The market is well stocked with extracted honey. We quote: White clover, basswood and California, 7@7¼ per lb.; Southern, 70@75 cts. per gallon. No demand for comb honey, except for fancy stock, at from 12@13c per lb. Beeswax, 27c.

HILDRETH BROS. & SEGELKEN,
28-30 Broadway, near Duane St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
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☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

LOST The old prices on Bee-Hives, and new ones found. Send for Circular—FREE.
14Etf **L. J. TRIPP, Kalamazoo, Mich.**
Mention the American Bee Journal.

WANTED AT ONCE—a man of some experience in apiary. References exchanged. ROSS & PARKER,
14A2t 700 West Street, Syracuse, N. Y.
Mention the American Bee Journal.

The IXL Extractor **STILL LEADS!** For Langstroth and Square Frames, $6; for larger sizes, $7 to $8. The IXL Cold-blast Smoker still smokes for 75c., postpaid. Order now. W. C. R. KEMP, Orleans, Ind.
14A5t
Mention the American Bee Journal.

EARLY ITALIAN **QUEENS AND BEES!** Tested Queens, $1.50; Untested, 75c., or $8.00 per doz. Two or more pounds of Bees in 1, 2, 3 or 4-frame Nuclei, with Queen at above price, 75 cts. per pound.
11Atf LUTHER W. GRAY, ORLANDO, FLA.
Mention the American Bee Journal.

FOR CASH Italian Queens in April and May. One Untested, 80c.; ½ doz., $4.50; per doz., $8.50; One Tested Queen, $2.00; per ½ doz., $10.00; per doz., $18.00. Guarantee safe arrival. D. E. ALDERMAN,
14A1t Clinton, Sampson Co., N. C.
Mention the American Bee Journal.

My 22nd Annual Price-List of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. H. H. BROWN,
14E4t 23C2t Light Street, Columbia Co. Pa.
Mention the American Bee Journal.

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I HAVE bought the stock and fixtures of E. S. ARMSTRONG; will continue the same business at the old stand; am too busy to issue Circular; will quote prices; am anxious to make friends; will supply Armstrong's customers, and guarantee them the OLD-TIME satisfaction. Refer to E. S. Armstrong, or to any one who knows me.
14A4t **G. M. TERRELL, Jerseyville, Ill.**

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Is a new, 50-page Illustrated Book. Amongst other things, it tells how to prevent swarming by inversion of Queen Cells; how to use Drone Comb in the brood-chamber, and the Queen not lay eggs in it; how to maintain two laying Queens and one virgin Queen in one brood-chamber; how to confine the Queen to any desired number of brood-combs and the worker bees pass in common. **Price, 25 cts.,** by post.
14A1t C. W. DAYTON, Bradford, Iowa.

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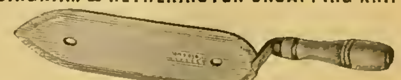

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Doctor Smoker	....3½ inch,	post-paid	....$2 00
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Sent promptly on receipt of price. To sell again, send for dozen or half-dozen rates.

Milledgeville, Ill., March 8, 1890.
Sirs:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do, your trade will boom. Truly, F. A. SNELL.

Vermillion, S. Dak., Feb. 17, 1890.
Sirs:—I consider your Smokers the best made, for every purpose. I have had 15 years' experience with 300 to 400 colonies of bees, and know whereof I speak. Very Truly, R. A. MORGAN.

Sarahsville, Ohio., March 12, 1890.
Sirs:—The Smoker I have has done good service since 1883. Yours Truly, DANIEL BROTHERS.

☞ Send for descriptive Circular and testimonials to
BINGHAM & HETHERINGTON,
14Atf Abronia, Mich.

POOR MAN'S LANGSTROTH HIVE

Before buying Hives, send for our Price-List on this Hive as described on page 186 of this Journal. It is the BEST and CHEAPEST Hive made.

SMITH & SMITH,
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Mention the American Bee Journal.

PRICES REDUCED! The DIBBERN (perfect) **Bee-Escape** is now offered to all as follows: By mail, one Escape in small board, 35c.; 6 for $1.25; 12 for $2.40. Complete Board, 50c., by express; 6 for $2.25; 12 for $4.00. State size of Super. It is a perfect success. Every Escape made by us is warranted. C. H. DIBBERN & SON, Milan, Ills.
14A2t

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A PART of our goods was destroyed by fire March 12th, necessitating a short delay in filling orders. We have added more machinery and by running day and night, expect soon to ship with our usual promptness.
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SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

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14A1t JOHN S. REESE, Winchester, Ky.
Mention the American Bee Journal.

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DR. G. L. TINKER, New Philadelphia, O.
JOS. NYSEWANDER, Des Moines, Iowa.
G. B. LEWIS & CO., Watertown, Wis.
PAUL L. VIALLON, Bayou Goula, La.
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The book for beginners. The most complete Text-Book on the subject in the English language.

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Circular, with advice to beginners, Samples, &c., free. Send your address on a postal to

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Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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31Atf NAPPANEE, IND.

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WE CAN now furnish the **Van Deusen** EXTRA-THIN Flat-Bottom FOUNDATION put up in 25-lb. Boxes, in sheets 16½x28 inches, at **$12.50** per box. **12 ft.** to the lb.

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All orders for any other quantity than exactly 25 lbs. (or its multiple) will be filled at the regular price—**60 cents** per lb.

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We desire to get our friends all through the country to aid us in increasing our list of Subscribers to the

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These editions are not for sale, but are gotten up specially as Premiums for securing New Subscribers. They are nicely printed, and bound in strong paper covers, and will be sent FREE of postage, as pay for work to be done for us. Clubs need not be located at one post-office, and may contain one "Bee Journal" and one "Home Journal" to the same or different addresses ; or both may be for either JOURNAL, as may be desired.

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CHOICE PANSY PLANTS.

For $1.25 I will send by mail, postpaid, distinctly labeled, and carefully packed, 6 good plants of each of the following 12 kinds of choicest pansies: King of the Blacks, almost coal black. Snow Queen, flowers of a delicate pure satiny white. Emperor William, splendid ultramarine blue, with purple violet eye. Rex, deep velvety purple. Azure Blue, very fine. Pure Yellow, large golden flowers. Rose Marbled, very beautiful. Delicate Porcelain Blue, white centre. Mahogany-colored, very fine. Striped and Mottled, exceedingly beautiful. White Treasure, a perfect gem. Gold Margined, strikingly handsome. If you want the handsomest Pansy bed you ever had, send for this collection. Plants will be ready May 1st and I will send to any post-office in the United States or Canada for $1.25, postpaid. All orders promptly acknowledged and notice given you when plants are mailed. Beautiful catalogue of choice vegetable and flower seeds and other plant and seed collections, &c., free. Send for it. Address, F. B. MILLS, Seedsman and Florist, Thorn Hill, Onondaga Co., N. Y.
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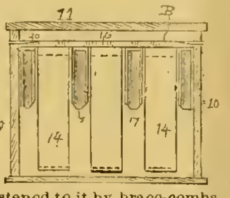

By the use of my IMPROVED SPACER, an ordinary Hanging Frame Hive is converted into a Reversible, or Movable Hive. A Hive is quickly and correctly spaced, and the frames are held in their proper position and will not be lifted when removing the cover if they are fastened to it by brace-combs. A contracted hive is made movable or invertible. In adopting this, it requires no change in a hanging-frame hive. Price of Brood-Chamber and 8 Frames, $1.50. One Hive and one doz. extra Spacers, $4.00. In ordering, state what frames you use and give the width of your hive, inside. J. B. WILCOX, Manistee, Mich.
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Mention the American Bee Journal.

For Comb Foundation Mills,

WRITE TO

W. C. PELHAM, Maysville, Ky.
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CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

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WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship.

Italian Queens and Bees at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

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W. Z. HUTCHINSON, Flint, Mich.
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Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,
6Etf JNO. NEBEL & SON, High Hill, Mo.

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BEE-SUPPLIES. Wholesale and Retail.

We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

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BEE Keepers' Supplies, Hives, Sections, Foundation, &c. Send for Circulars.
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FOR SALE! **Italian Bees and Queens,** in small and large lots, at a VERY LOW PRICE. Address, OTTO KLEINOW, No. 150 Military Ave., Detroit, Mich. 12Atf

Send 75 Cents for my Book, entitled—"A Year among the Bees"—114 pages, cloth bound. Address,

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. April 12, 1890. No. 15.

EDITORIAL BUZZINGS.

☞ Honey in Japan is gathered mostly from buckwheat. It is of dark color, and its use is generally for medicine.

Bees object to the smell of whey, says Allen Pringle in the *Canadian Bee Journal*, on the clothing of those who handle cheese. Quite often, when the bees are said to be "cross," the cause may be some objectionable odor.

The Queen-Restrictor is the name of a new 50-page pamphlet by C. W. Dayton. It details a method of brood-nest inversion, contraction, and exclusion, by the use of brood-frames in combination with queen-excluding metal.

Honey-Moon, it is said, is a term of Teutonic origin, and derived from a luxurious drink prepared with honey by the ancients. It was the custom to drink of diluted honey for thirty days, or a moon's age, after a wedding feast. It is good to "keep sweet" for a month after marriage, but it is better when that "sweetness" extends throughout not only the months, but the long years of wedded life.

☞ An interesting article from the Rev. W. F. Clarke, concerning his late tour, will appear in next week's Bee Journal. In our item, on page 211, the printer omitted two letters, which make considerable difference. He is the *ex*-President of the Ontario Bee-Keepers' Association—not the present incumbent of that honorable office. Mr. Allen Pringle is the presiding officer for the present year—and it was a very wise selection, too.

Mr. Jacob Oswalt, of Maximo, O., has sent us a copy of the Alliance (Ohio) *Leader*, containing a full account of the re-union of the ex-pupils of Mr. Oswalt, who, with their friends, gathered to the number of 500, to show their respect for one who had been a teacher in that community for twenty years. Judge Thoman, of Chicago, being unable to attend the assembling of old-time friends, sent a splendid address, on "The Thumb Mark of Life," which was read, to the delight of all, on account of its beautiful diction and lofty sentiment. Mr. Oswalt responded in a very happy manner, by giving a brief sketch of his own life.

Both Mr. and Mrs. Oswalt, on behalf of neighbors, friends, and their own children, were presented with beautiful upholstered rocking-chairs, two pairs of gold spectacles, and a silver butter-knife and sugar-spoon; on behalf of his ex-pupils, an elegant gold watch was given to Mr. O., who feelingly responded for the many expressions of esteem. Evidently one of the correspondents of the Bee Journal was well "rocked" and "watched" for once in his life, if never before or again. We are glad to hear of one more "jolly old pedagogue."

Honey-Vinegar—Mr. S. L. Watkins, of Grizzly Flats, Calif., gives this recipe for making honey-vinegar, in the *Pacific Rural Press:*

> In extracting, save all the scraps of comb and cappings containing honey. You can make the best kind of vinegar from these honey drippings. Take 20 gallons of rain-water, add 5 pounds of honey and 2 gallons of cider vinegar. Use common alcohol barrels, with an inch hole bored in the upper end of each head near the staves, to allow a free circulation of air. Nail some wire gauze over the hole to keep out insects. Keep in the sun, or in a very warm room, and in a few months you will have the best kind of vinegar.

☞ Dr. D. C. Spencer, of Augusta, Wis., is again bereaved. His wife died on the 3rd ult. This is a sad affliction. The Bee Journal extends its condolence—together with its numerous family of readers. The Doctor's apicultural articles have been many, and were very acceptable to us all.

Honey-Production in Germany yields a net income of 17,000,000 marks (about $4,250,000), and it is so important an industry in that country that the German Government affords it the protection of special laws in the interest of bee-keeping, thus giving encouragement to those engaged in the pursuit.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Bee-Keeping as a Business.—Concerning having some other occupation to go with bee-keeping, Pres. R. L. Taylor has given his opinion as follows:

> We find life none too long to perfect one occupation. If there is added to this regular money-making occupation some other money-making business, there can never be so great a success. I think I can make more money by choosing some one business and putting my whole soul and life into it, but my nature rebels at such a course. There are some other things that I like to do as well as bee-keeping, so I sacrificed my love of money for the pleasure of having more than one pursuit.
>
> In the summer the bees require close attention, and any pursuit to combine with bee-keeping, must be one that will require but little attention at that time. Hence, this question comes back to me: If bee-keeping is so profitable, *why not keep more bees?* Or, if it is not profitable, why follow it at all? If a man does his work in the winter as he ought to, he can care for 300 colonies of bees.

Chaff Hives.—G. M. Doolittle remarks as follows in the *American Rural Home*, about the use of Chaff Hives:

> Colonies in hives not protected by chaff have scarcely gained at all in numbers; in fact, some of them have dwindled somewhat. Other colonies in large hives packed on all sides with chaff, have gained rapidly; even the weak ones are gaining in numbers with astonishing rapidity. The cause of this difference seems to be that during the day the heat from the sun penetrates the chaff hive, and is confined during the cold night that follows. Add to this, that the bees generate some warmth, and at times to thrust the hand under the quilt, seems like putting it into an oven. This seems to be an item greatly in favor of chaff hives. There is no denying the fact that bees enjoy heat. Just observe how they multiply during the warm weather of June, July and August.

Another Bee-Escape.—Mr. W. W, Moore, of Gillett, Iowa, has sent us a model of a new bee-escape, which he has invented. It consists of a tube with a treadle running down to an open hole in the end. The treadle being balanced to the weight of a single bee, when the last bee escapes, the fore-end goes up and the hole is closed, so that none can return. Mr. Moore describes its formation thus:

> It is entirely made of tin, and with as little complication as possible. At the pivotal point of the treadle, each side is cut a fine coil to keep the treadle from the sides. Also two cuts down each side—one piece to turn down for the pivot, which are to be twisted for the edge to turn up—the other cut to turn down over the treadle to keep it in place. Any one is at liberty to make and use them.

☞ This is what the North Dakota *Argus* says of the Illustrated Home Journal:

> It seems hardly possible that a Magazine of so much excellence can be furnished for $1.00 a year. The literary and artistic features of the current number are simply superb, and will be sure to please all fortunate enough to possess it.

GLEAMS OF NEWS.

Adulterating Extracted Honey is so little in practice now, that it would seem to be useless to mention the matter. The fact that it is unprofitable to do it when the price of honey is so low, is pretty good proof that it is done but very seldom. We admit that there is some of it to be found occasionally—as we mentioned on page 211—but it does not interfere with the sale of a pure article.

Mr. Geo. F. Robbins, of Mechanicsburg, Ills., seems to have had some trouble on that matter, and sent us the following last January, for which we could find no room until now:

While canvassing for orders for honey in Springfield, Ills., last autumn, I held a conversation with Mr. John B——, of the firm of B—— & Bro., concerning adulterated honey. Mr. B. was certain that extracted honey was adulterated to some extent, and he gave me some reasons that I could not well answer. He cited a certain grocer of very unsavory reputation in the city, who had honey to sell all last winter, when honest merchants could not get it. Mr. B. wrote to a firm in Chicago, who replied that they could get him no honey that they could warrant to be pure. I obtained their address (Corbin, May & Co.), and wrote to them, the burden of the letter being as follows:

I had heard that they had written to B—— & Bro.; stated that I was a producer of pure honey, and I desired to know if honey was adulterated and placed upon the market, and asked them if they ever handled spurious honey; or if they could cite me to any manufacturer of, or dealer in, such honey. To this they returned the following evasive reply:

Chicago, Ills., Oct. 21, 1890.

Dear Sir:—In answer to your favor of the 1st, we do very little in honey. For such information as you desire, we would refer you to B. & W., Fourth Avenue, Chicago. They are large dealers.

Corbin, May & Co.

It occurs to me if they never handled adulterated honey, they would have been willing to say so. I neglected for nearly two months to write to B. & W.; I hesitated to conceal the motive for writing, and I about decided that any answer that I could get would be equally as evasive, if that motive was made known—at least in case the parties handled spurious honey. But in all my history before, I have not been so worried with questionings as to the purity of my honey. It seems to have become a popular conviction that honey—especially liquid honey—is pretty generally "tinkered," and merchants themselves largely share in this opinion. I finally decided to do what may be regarded as questionable, and wrote to the above-named firm, in substance as follows:

B—— & W——Gents:—Do you deal in adulterated honey? or can you cite me to any manufacturers of the same?

Geo. F. Robbins.

I received the following reply:

Chicago, Ills., Jan. 10, 1890.

Dear Sir:—In reply to your letter of the 9th, we would say that we sell mixed honey when there is a call for it, but straight goods are so cheap now that there is not much demand for anything cheaper. We have straight goods as well as the adulterated, so that our customers can have their choice. If you are looking for something of the kind, we should be pleased to have your orders. B—— & W——.

It seems to me that that letter states the matter pretty clearly. Mixed honey is made and sold, but there is so little demand for it, because the pure article is so cheap. But dear! dear! how am I to convince folks that they are not victims of attempts at systematic fraud, and that I am not a party to such transactions? When a man talks about manufactured comb honey, I can generally "cool him down" by giving him a "smell" of Root's offered reward; but to do my best, I fear I cannot convince them that liquid honey is not generally impure.

Geo. F. Robbins.

The Weather Prophets, and the predictions of calamity are now making quite a stir. A crank in California asserts that several of the larger cities of the United States will be swallowed up by earthquakes on the 14th inst. Another crank who claims to be "the Messiah," predicts that Rockford, Ills., where he resides, is to be destroyed very shortly.

Mr. A. H. Noble, of Nashville, Tenn., writes us as follows on the subject, on April 3, 1890:

Dear Editor:—In reading your article, "The Weather Prophets," of March 22, prompts me to send you the enclosed, which is as singularly accurate as yours was wide of the mark.

The traditional goose-bone must still claim some merit, and the man who interpreted it, to say the least, has done some very good guessing. If it is worth publishing, it may be of interest to the bee-fraternity, who are always speculating on the weather prospects. This was cut out of one of our "dailies" four or five months ago:

What a Bone Tells of The Coming Winter.—A New Haven special to the St. Louis *Globe-Democrat* says: Henry Stillman, of Woodstock, Windham's county weather prophet, has made his annual forecast of winter by a goose-bone. He says the bone shows clearly that we will have an open winter. The goose-bone is accepted by many Windham county people as a better authority than Wiggins or Devol, or even old David A. Daboll, the Connecticut almanac-maker. In many farm-houses it will be found hanging in the hall, where it is frequently examined.

The true prophetic bone, it is said, can only be obtained from a goose that has a trace of wild blood, and that was hatched out in the spring. A bone taken from a goose hatched in May, by Mr. Stillman, shows a row of dots around the keel of it, indicating the probable temperature. The darker the spots are, the colder the weather is sure to be. It is asserted that the marks dividing the bone indicate the three winter months, December beginning at the front.

Mr. Stillman says he has read the bone closely, and finds that it indicates more regular weather than last year, and not so severe as even the last mild winter. There will not be many days during which running water will freeze. The coldest weather will occur during the latter half of January, and during that time there will be several days of freezing. Near the point of the bone is a marked discoloration, showing that the first day of winter will give proof of the season's change. Christmas will be "green," but wet and cold. January's entrance will be marked with warm days, growing gradually colder.

The coldest day of winter will be Jan. 27. The brief spell of severe weather will be succeeded by heavy thaws, and the traditional January thaw will come in February. That month will be a disagreeable one, with heavy snows and rains. An early and decided thaw is among the promises of the bone. February will burst into March with swollen mountain streams, and disasters may be looked for. There will be an early spring.

The Time for Spring Work will soon be here, and those who need a guide for all the operations in the apiary, should procure a copy of Dr. Miller's book entitled "A Year Among the Bees." Its descriptions commence with the necessary work in the spring, and run through the entire year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. We have only a limited number of copies left, and those who want it should send for it at once. We will hereafter mail it, bound in cloth, to any address for **50** cts., until all are gone.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

Frank Leslie's Illustrated Newspaper of April 3, contains thrilling and graphic pictures of the great floods in the West and Southwest, made by a corps of artists especially for the paper. The horrors of the flood at Louisville and other cities and towns along the Ohio and Mississippi valleys are vividly portrayed; the scenes of the disaster clearly presented, and the frightful nature of the calamity is evident at a single glance.

Convention Notices.

☞ The next meeting of the Carolina Bee Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C E. YOCOM, *Sec.*

☞ The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee is at work to secure rates on the railroads. A cordial invitation is extended to bee keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.

J. W. ROUSE, *Sec*

The Brown Bees.

Written for Saint Nicholas

BY MARGARET EYTINGE.

Said litttle brown Bee to big brown Bee:
"Oh! hurry here and see, and see,
The loveliest rose—the loveliest rose
That in the garden grows, grows, grows,
Hum-um um—hum-um-um,"
Said little brown Bee to big brown Bee.

Said little brown Bee to big brown Bee;
"Much honey must be here, and we
Should beg a portion while we may,
For soon more bees will come this way.
Hum-um-um—hum-um-um,"
Said little brown Bee to big brown Bee.

Said big brown Bee to little brown Bee:
"The rose is not for me, for me,
Though she is lovelier by far
Than many other flowers are.
Hum-um-um—hum-um-um,"
Said big brown Bee to little brown Bee.

Said big brown Bee to little brown Bee:
"No honey-cup has she, has she,
But many cups, all brimming over,
Has yonder little purple clover.
And that's the flower for me, for me.
Hum-um-um—hum-um-um,"
Said big brown Bee to little brown Bee.

QUERIES and REPLIES.

Zinc Queen-Excluders—Proper Width of Top-Bars.

Written for the American Bee Journal

Query 700.—1. Are the zinc queen-excluders used by the advanced bee-keepers? 2. When working for comb honey, how wide should the top-bar of brood-frames be made for the Langstroth frame?—New York.

1. Yes, sometimes. 2. Seven-eighths of an inch.—MRS. L. HARRISON.

1. By some of them. 2. Seven-eighths of an inch.—A. B. MASON.

1. Yes. 2. Seven-eighths of an inch, or even one inch does no harm.—A. J. COOK.

1. By some, but not by all. 2. An inch, or a little more.—M. MAHIN.

1. Yes and no. Some do; some don't. 2. One inch.—G. M. DOOLITTLE.

1. Of course they are. I use them. 2. About ⅞ of an inch.—EUGENE SECOR.

1. A great many use them. 2. The standard Langstroth frame is ⅞ of an inch wide. How wide it should be, time will tell.—H. D. CUTTING.

1. Some use them, and some do not. 2. The open top-bar, ⅞ of an inch wide; closed end top-bar, scant 1½ inches wide.—J. P. H. BROWN.

1. Let them say. We do not use them, and do not *know* of any that use them largely. 2. Seven-eighths to 1⅛ inches, at your choice.—DADANT & SON.

1. More or less by a great many, certainly. 2. Just now that is an unsettled question. I do not think that I would have them *less* than one inch.—C. C. MILLER.

1. Yes, by many of them. 2. That is now a much-discussed matter. I prefer them ⅞ of an inch.—R. L. TAYLOR.

1. Yes, sir; and more will use them when their advantages become better known. 2. Top-bars of frames should be 1 inch by ¾, if you wish to keep them reasonably free of brace-combs.—C. H. DIBBERN.

1. To some extent, where comb honey is the object. 2. I use top-bars ⅞ of an inch wide, and ⅞ of an inch thick.—J. M. HAMBAUGH.

1. Yes. 2. I like them an inch wide. Usually they are made ⅞ of an inch wide, for the reason that they are then conveniently ripped off of lumber of that thickness.—J. M. SHUCK.

1. If they are not, they ought to. I believe, however, that the most successful ones do; but I also think that they are not using queen-excluders where they are not necessary. 2. Not less than one inch wide. Probably one inch and 1-16 wide for 1⅜ spacing, will prove the most satisfactory.—G. L. TINKER.

1. Yes, by *all* of them. 2. This is a mooted question, but my experience of over twenty years, teaches me that ⅞ of an inch is just right, that being the exact thickness of the brood-comb when brood is sealed up in both sides. By close working, viz: bee-space apart, the best results will be given.—J. E. POND.

1. Yes, sir; the most advanced and successful bee-keepers use them, and advocate their use, and no kind of a device will ever be invented to take their place for keeping brace-combs away from the surplus receptacles, and keeping the queen below. Put me on record for that. 2. Never more than ⅞ of an inch.—JAMES HEDDON.

1. I cannot say who all use the queen-excluders. They are very useful when hiving swarms, to keep the queen from going into the surplus department before she has established her brood-nest; and they are very profitably used when taking honey with the extractor. Any device that will hinder the queen from leaving the brood-nest to fill the surplus combs with brood, must be considered useful. When producing comb honey in sections, I do not use the excluders. My queens never bother the sections. 2. I use a ⅞-inch top-bar. A little wider will not hurt, but I see no reason for a change.—G. W. DEMAREE.

1. Yes. Quite a number of them use queen-excluders, and also advocate their use, but there are some good, practical apiarists who do not favor their use. 2. The question concerning the width of top-bars of frames is now being discussed quite largely. Perhaps the result may be a decision of the question. The usual width has been from ⅞ to 1 inch.—THE EDITOR.

◆

The Right Width for Entrances to Sections.

Written for the American Bee Journal

Query 701.—What is the right width for entrances to sections, with tin separators 3½ inches wide? A 1¾-inch section, with entrance cut ¼ of an inch, makes comb of only ¾ of a pound capacity.—Missouri.

Three-eighths of an inch.—A. J. COOK.

I do not comprehend the question.—M. MAHIN.

We do not use separators.—MRS. L. HARRISON.

Five-sixteenths, I believe, is the adopted width.—J. M. HAMBAUGH.

Five-sixteenths is what I use with sections 2 inches wide.—G. M. DOOLITTLE.

Five-sixteenths or ⅜ of an inch. I doubt if the *entrance* makes the difference in weight.—C. C. MILLER.

A ⅛-inch cut in the section will be sufficient when tin separators are used.—J.P.H. BROWN.

If the sections are cut out ⅛ of an inch each, it will give a ¼-inch entrance, and is about right with such a separator. You certainly do not succeed in getting them very well filled, or they would weigh 14 ounces on an average, as mine do.—C. H. DIBBERN.

One-fourth of an inch is a good width for that size separator. If you want your sections to weigh one pound, you will have to use 1⅞ or 1 15 16.—H. D. CUTTING.

We do not believe that the entrance has anything to do with the weight of the section. We want entrances wide and long. If 1¾ is too light, use 1⅞ or 2 inches. We prefer 1⅞—DADANT & SON.

A 1¾ section with *no* entrances, used with a wood separator of the proper style, makes as fine a section of honey as one could wish to see, and it weighs near enough a pound.—EUGENE SECOR.

One-fourth of an inch. But a separator as wide as the section is high, gives the best results, in which case the top and bottom bars of the sections should be ½ inch less in width than the sides.—G. L. TINKER.

The entrance should be ⅜ of an inch, *i.e.*, the top and bottom of the sections should be ⅜ of an inch narrower than the sides, and such sections would, if well filled, average nearly a pound.—R. L. TAYLOR.

I use sections 1¾ inches wide, and without separators. The sections will average 14 ounces. There is no such a thing as a pound section. Your tin separators are ⅛ of an inch too wide. I prefer to have them 3⅜ wide. When the sections are in place in the section-case, the openings should be full ⅜ of an inch. If your combs are not as thick as they ought to be, say 1⅛ thick, your sections are badly adjusted.—G. W. DEMAREE.

One-fourth to ⅜ of an inch. We cannot help it about the weight of the sections. Those who use Langstroth frames (and nearly everybody does) cannot use sections a trifle larger, and get along with any comfort. Charge all the faults, and credit all the virtues, of the 4¼x4¼ section, to the "Wizard of Medina."—J. M. SHUCK.

The matter of getting exact weight into a section is one of great difficulty. I think that ¼ inch is about the correct width. The tin separator will add a little to that width. Any narrower entrance will not be taken to kindly, and any wider will cause trouble in other directions. The question is not of so much importance as it would seem to be at first sight, as sections of comb honey are seldom sold by weight, but by the section. Particular attention should be paid to the appearance of the package, as a nice, tasty section of light weight will outsell a heavier one that is not as neat. The eye as well as the stomach must be pleased in all such matters.—J. E. POND.

Tin separators do not change the width of the entrance in among the sections. Its bottom edge is up a bee-space above the section. The proper space should be ⅜ of an inch. It used to be ¼ of an inch. I believe I was the first to object and propose a space of ⅜ of an inch, which is now universally used. Our seven-to-the-foot sections, when used with separators, give a comb of more than ¾ of a pound capacity. Fourteen of them usually weigh 12 pounds. We prefer to have our sections underweigh a pound, and to have the pound the maximum and not the minimum or average; but either with or without separators there always will be a variation in weight.—JAMES HEDDON

Three-eighths of an inch is right for entrances to the section, but that has nothing to do with the weight of the honey in the section. If you want a full pound of honey in the 4¼x4¼ section, you must have it one and fifteen-sixteenths inches in width; but even then there will be a variation in the weight of the honey.—THE EDITOR.

CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey—Its Production, Care and Sale.

Written for the American Bee Journal

BY DR. H. BESSE.

One of the important things to know is where to locate the hives. Beginners who are just starting in apiculture, are apt to conclude that because bees can sting, they should be put in some secluded and out-of-the-way place. This, in my opinion, is a very wrong practice.

Bees that rarely see the bee-keeper or his family, or any other human beings, become vindictive, savage and troublesome, when, on the contrary, if they see people passing and re-passing frequently every day, and thus have the advantage of human society, they become amiable and docile. This is the condition of things that should exist in all apiaries, and especially those run for extracted honey.

For convenience, the hives should be located near the extracting room; also, if possible, near the walk to the barn, garden or spring-house, where women and children are almost always in sight. The entrances of the hives should face toward the places most frequented by human beings.

Extracted honey is, as yet, with many persons, a new article, with which they have not become familiar. They have never tasted its delicious flavor, or seen its beautiful amber color. Extracted honey is honey in its perfectly pure state, as found in the multiplied millions of flowers, and gathered and ripened by the millions of industrious and happy little honey-bees.

GETTING EXTRACTED HONEY.

To secure this God-given, healthful and luscious food, after the hives and supers have become heavy with stores, we proceed as follows: Direct a puff or two of smoke from the smoker into the entrance of the hive, then remove the cover from the super, also remove the cloth that covers the frames of comb; then direct a stream of smoke down among the bees and between the combs. Under this treatment, the bees become alarmed, and quickly retreat below where a portion of them may remain on the bottom of the frames. These frames are to be lifted out, one by one, and the bees that remain on them are to be removed by giving each frame a quick jerk downward, and thus dislodge the most of the bees; then, if a few still remain, take a yucca bee-brush or a turkey's wing-feather, and with a quick and light motion, brush the remaining bees off into the hive, where you have driven the first and shaken the others. As you remove the bees from the combs, place the combs into the carrier, and, when filled, it should be carried or wheeled into the extracting room. Such combs should be about filled with honey, and at least two-thirds capped.

I now proceed to extract as follows: Lift out a frame of comb, and stand it upon the frame over the extracting tub or can, by taking hold of one lower corner with the left hand, and place the upper corner of the opposite end of the frame downward, resting upon, or in, a cavity on the center of the frame over the extracting can. This throws the upper edge of the frame or comb downward, and leaning toward the left shoulder of the operator at an angle of about 45°.

If the operator be left-handed, he will hold the frame with his right hand, and use the uncapping-knife with the left. I have used several uncapping-knives, but I prefer the Bingham & Hetherington for uncapping only. When I am at work at uncapping, I have a one-gallon tin-bucket, lined with a wooden basket, that will fit snugly into it, and kept full of hot water standing over a lamp; in this I keep one knife all of the time, using two, and changing frequently. The basket keeps the knives from getting dull.

THE EXTRACTOR AND ITS USE.

The honey extractor is now made by many different men, and likewise in as many different styles, yet the principle is the same in all, namely, centrifugal force. The extractor most common in use is a tin can made fast to a table or bench, provided with a revolving frame-work inside, with wire-cloth supports for the uncapped combs to rest against, and into which the combs are placed. These combs should stand on end, leaning slightly further apart at the upper than at the lower ends. This prevents the honey from flying over the top of the can.

Combs should also be so placed in the extractors, or the extractor so operated, that the bottom edge of the comb, as it stood in the hive, whirls in advance, as the honey clears the cells more directly and readily in an outward, backward and downward direction. Now if the cells were built horizontally in the combs, it would make no difference which edge of the comb was in front.

When the outside of the combs are extracted, reverse or turn them around, and then turn the extractor in an opposite direction. The centrifugal force that throws the honey from the cells, and through the wire-cloth supports, and which runs down the inside of the extractor to the bottom of the can, and is drawn off through a gate or faucet, is now ready for straining and canning.

The operation of extracting does not injure the combs, therefore they can be replaced on the hive, and re-filled several times during the season. I have combs that I have extracted from ever since extractors first came in use, and they are as good now as at first, if not better.

Honey should be perfectly ripe before canning, and, in fact, I prefer to have it ripe before extracting, but if it should not be entirely ripe, it can be matured by evaporation, by exposing it in an open vessel (covered with thin cloth) to a warm and dry atmosphere.

I always aim to keep the different kinds of extracted honey separate, especially that extracted in summer and fall, as it needs grading as much as does comb honey.

HONEY FROM CAPPINGS.

To get the honey from the cappings, I leave them in the uncapping-can over night. This can is provided with a fine wire-cloth strainer near the bottom, through which the most of the honey passes by morning, and from whence it can be drawn through a gate, and put with the extracted honey. The cappings are lifted out with the strainer, and turned into the solar wax-extractor, where it will melt through the day, if pleasant, and the next morning I find a beautiful cake of beeswax, and beneath it, in the same place, all of the honey that had been left in the cappings the day before. This I find nice, thick, of extra quality, and this is the wax and honey to save and show at the fairs—if you do not want some other fellow to get ahead of you.

KEEPING HONEY SEPARATE.

If in the spring, during fruit-bloom, I find it necessary to extract honey, and I find it an inferior article, on account of unpleasant taste, color, etc., I aim to have all such extracted before the commencement of the clover season, and kept for feeding in time of scarcity; the same rule will apply to late fall honey that is inferior in taste and appearance. Such honey, if ripe, is just as good for winter stores for the bees, as any, and should be kept for that purpose. If not perfectly ripe at the end of the season, it should be extracted and evaporated until it is of the consistency of good, ripe honey; or it can be brought to the boiling point, skimmed, and sugar added while granulated, until it is as thick as the best honey when it is cooled. It should then be fed at a temperature of 80° to 90°.

PURITY OF EXTRACTED HONEY.

Extracted honey has all of the good qualities, if not the superior, of comb honey, and when our customers once become acquainted with it, and know what it is, and that it is not strained honey, the demand for it will gradually increase to the advantage of all concerned.

Extracted honey is honey in its purest form, removed from the combs, and is free from all impurities. It is very different from the old-fashioned "strained honey" which was pressed out of the combs, and which contained, to a more or less degree, pollen, brood in all stages, dead bees, flies, etc., all of which was mixed with the honey. Now, things have changed under our advanced strides in apiculture, and I am glad that this class of goods is fast becoming extinct in our markets.

MARKETING EXTRACTED HONEY.

Extracted honey sells best put up in glass jars—the one-quart fruit jars, holding three pounds each, are very good, and when they are empty, they are very useful in the family. Should the market demand smaller packages, jars that will hold one and two pounds each should be furnished, filled, and neatly labeled with the producer's name plainly printed upon them, and put in neat retailing crates of one or two dozen each.

GRANULATION OF EXTRACTED HONEY.

We should always instruct our customers that pure extracted honey is very apt to granulate in winter, if exposed to a low temperature, and that granulation is a sure sign of purity, and that if adulterated, especially with glucose, it will not granulate. We should also inform buyers that granulated honey can again be brought to the fluid state by placing the jar or vessel that contains it, in hot water, and letting it remain until the honey is melted, but not long enough to come to the boiling-point.

HOME MARKET FOR HONEY.

All honey-producers should strive to build up a home market for their honey, then, with proper and continued effort in this direction, extracted honey will largely supersede the best grades of syrups and maple molasses. We need not stop to argue the value of honey as food, although we could say much in regard to the various uses to which it is put, as in culinary purposes as well as in medicinal preparations, and in preparing healthful and cooling drinks, etc.

We should explain to our customers why we can afford to furnish extracted honey cheaper than comb honey, and, if convenient, let them see us extract and put up the honey in a few jars, so that they could see for themselves how it is done. This would be a good thing to do at our fairs, where we could dispose of our extracted honey as fast as we could put it up, while the crowd would be looking on, filled with wonder and astonishment; and those buying would know that they were getting a genuine article.

I am satisfied that there is not one person in ten thousand who ever saw honey extracted, and not more than one in five hundred that has ever tasted it, therefore the industry of producing extracted honey is but in its infancy, with large and prosperous developments ahead.

Delaware, Ohio.

CARNIOLANS.

Their Characteristics Compared with Other Races.

Written for the American Bee Journal

BY E. L. PRATT.

The Carniolan bees have been attacked by a few persons who say that they are cross, and hard to handle. One or two have said that they were not as recommended as to honey-gathering. Now, I would ask, have these men been experimenting with pure Carniolans? I do not beleve that they have. The reputation of Carniolan bees will depend a great deal upon their purity. I, for one, would not recommend these bees, if I were not convinced that they were very desirable, good workers, gentle, and second to none in many of the noted characteristics.

As a test of their gentility, I have often taken unbelievers into my yard, opened a hive, and taken out the combs without the use of a single puff of smoke. Very often I would take a comb by one corner, and swing it about my head at such a speed that the thin honey would sprinkle out. Not one bee would leave the comb, nor would they be thrown off by the motion, but "cling like Death."

We all know that soon after a honey harvest closes, there is a desire to rob, and bees cannot be handled so well on this account. But the Carniolans will remain inside of their respective hives, unless sweets are exposed, or hives left open for any length of time. We must bear in mind that they are an eager race, and always on the alert for something sweet; therefore the apiarist should not attempt to handle them directly after a honey-flow, for fear of teaching them a bad habit.

They are not given to robbing each other, but they will appropriate exposed or poorly protected sweets during a dearth of nectar, the same as any race of bees.

In a yard of all Carniolans, there is very little robbing, even at times when such a condition is most favorable. In a hand-to-hand fight, Carniolans *vs.* Italians, however, the Carniolans comes off best every time, showing their extraordinary powers of protection.

On occasion of robbers attempting to enter a well-regulated Carniolan colony, their Yankee expedition is exhibited. Italians and blacks will spend time in pulling and hauling at a robber bee, and at last let her go to continue her ignoble work, but the Carniolans will pounce on such intruder and despatch it at once, without the least ceremony.

The only fair way to test this race is to first make sure that you have them pure, and then go at it in a manly and unprejudiced manner. Give them their just dues, without the biased opinion of breeders of other races to discourage you. *Fair play* is all that is asked.

Marlboro, Mass.

BEE-KEEPING.

Some Improvements to be Made in Apiculture.

Written for the American Bee Journal

BY FRANCIS D. LACY.

I feel much interested in the honey-resources of our country. The various improvements that have been devised to facilitate the bee-culture, will occasion some, no doubt, to conclude that the acme of perfection is reached, and not a stone has been left unturned in the way of improvement; but doubtless this is not yet the case, and twenty years of the future will prove that the bee-culture of to-day is comparatively in its infancy, and even the revolutionizing of a greater portion of the present method of operation is liable to take place within that time.

Consider what twenty years of the past has done, and then contemplate how that to-day many who are oldest in the business, disagree relative to some of the most minor points. How, and why, does this occur? Does it not indicate that many of the substantial facts have not been practically reached, else why do "doctors disagree?"

Again, there is scarcely a common point in question, but what nearly every one has his arbitrary opinion upon, yet failures are made in a thousand ways—and what is the matter? Thousands of dollars have been expended by experimenting and working from speculation and theory, which never have been rewarded with any successful results, while occasionally a happy thought striking parallel with the natural habits of the bee, with a device of nominal cost, has been adopted because of its being a success.

To-day, the discussion is centered strongly upon the annoyance of the "brace-combs," and how to remedy it by modification of the top-bars of the brood-frames. Many believe alike upon a certain point, yet some others have tested the same, and met with failure. It seems evident to me, that as long as it is the habit of bees to produce those brace-combs under certain circumstances, they can never be successfully avoided while the opportunity is still offered by the peculiar mechanism of the hive. It is impossible for any device to be favored with the desired results, that does not meet the natural requisitions of the bees, for you are not going to culture them against their habits, any more than you will be able to teach the pig to answer questions, and play cards upon any other conditions than in conformity with its gluttony.

The bee, however, is no doubt one of the most peculiar of all insects, in apparently deviating from its natural course of action; but this is merely apparent, for doubtless it is as true to its nature as any creature that God ever ushered into life. Probably, the occasion for so very many being led astray in relation to the working of this insect, is from the fact that the slightest difference in the construction of appliances used for its facility in operating, may occasion widely different results leading in the direction of either success or failure.

I am doubtful if the brace-comb difficulty will ever be successfully dispensed with, unless some digression is made from the line in which discussion is being had. Now, I feel confident that I have solved the enigma, but I desire to further test my theory by actual demonstration. If I have not made a mistake as to what bees will do, I shall be happy to offer by the middle of the summer a valuable gift to the bee-fraternity. But this is only adjunctive of what may yet be done to improve and facilitate the work.

A method of wintering bees without loss in this latitude, is yet to be devised. Now this is a problem that is yet to be solved, and one which the future must at a late day, usher to the light; for the wants of man in the past have in the line of progress forever been supplied, and when the wise head shall ask properly this favor in behalf of humanity, time shall soon bring forth the happy results. But in this, whoever hopes to have the honor of first discovery, must study carefully the habits of the bee.

HONEY-HOUSE.

Directions About Building One for an Apiary.

Written for the Farm, Field and Stockman

BY S. E. MILLER.

A honey-house located in or near the apiary will be found very handy for the following purposes: Extracting, removing comb honey from the supers, and in fact for doing all the work pertaining to the apiary, as well as for a store-house for honey, the implements used in the apiary, empty hives, and supers not in use.

The size of the house should depend somewhat upon the size of the apiary, and might vary from a 10x10 building to one four or five times as large. I think that any one having only a small apiary of eight or ten colonies will find it very convenient to have a suitable house. One of our veteran bee-keepers recommends having the house at one side of the apiary, so that the entire apiary can be taken in by a view from a single door or window. Although I have had no experience in this line (having only lately built a house, and not yet put it into practical use), I should much prefer to have the house in the center of the apiary, thus saving many steps while working at extracting, etc.

The object in this age is to accomplish the most work with the least expenditure of strength, and produce our products at the smallest cost, so as to be able to cope with our competitors. The producer of honey finds himself no exception to the general rule; therefore he should consider well his plans and try to find the "shortest cut" to all things pertaining to his industry, and should see that everything is so arranged in the house that he may not be compelled to take any unnecessary steps.

Perhaps I can best explain my ideal honey-house by giving a description of the one just built by us (Miller Bros.). Our apiary contains about 75 colonies, is designed to accommodate 100 arranged hexagonally, the rows being seven feet apart, and the hives seven feet apart in the sows. The center of the house is the center of the apiary. Thus it will be seen that it is about 15 steps from the outside, or most distant, hive to the center of the house.

The house is 24x15 feet outside, one story high, having a rubber roof with a pitch of two inches to the foot. There are two windows and one door on the south, one window on the east, one door and one window on the north, and one door on the west, thus admitting of either seeing or walking out on all sides.

When completed, there will be two rooms, the smaller (west) room to be half the size of the larger, to be used as a store-room for honey. This has a window in the south side, and a door in the west, and is so arranged that comb honey stored therein can be fumigated with sulphur in case the moth-worms should get in it.

The larger room will be the extracting-room, containing the extractor, uncapping-can, a table for general use, scales, empty hives, supers, empty and surplus honey-combs in winter, and all implements belonging to the apiary.

The windows will be covered by wire-cloth or screens, so arranged that bees which may chance to get into the house may escape, but those outside cannot get in. This can be done by nailing two cleats about half an inch thick on the window-facing, and fastening the screen to this, allowing it to run about four inches above the upper panes, fastening at the sides and bottom, but not at the top. Bees that get in will go to the window, crawl to the top of the screen and escape, while those outside are not at all likely to find the entrance. We might also have screen-doors, but do not consider them necessary.

The best thing I can suggest to those not wishing to build a house, is a tent. This can be put up to do the extracting in, and taken down and put in shelter when not in use; but I can say from experience, that this is very troublesome and inconvenient.

Bluffton, Mo.

MARKETING.

Good Suggestions About Selling Extracted Honey.

Written for the American Bee Journal

BY WM. H. GRAVES.

For some time I have been strongly prompted to write an article, ventilating some of the erroneous impressions of the present day in regard to our pursuit. A few weeks ago I returned from a trip to some neighboring towns for the purpose of disposing of some extracted honey. My experience during that time will form the basis for this article, as it only confirmed what had been previously decided by me to be a settled fact.

One thing, we make a mistake when we handle anything but liquid honey when selling extracted. It is positively necessary to have it thoroughly ripened. Still another, for retailing say from one to five pounds, a glass package is far preferable to anything else, and that to be something that can be utilized after the honey is all eaten. For this purpose I have never found anything better than one-quart, self-sealing fruit-jars, which will hold three pounds of well-ripened honey. With a neat label on, it forms a very convenient and attractive package, but I have complaint from customers, saying that they were investing as much money in glass as honey. The small packages sell better in large cities.

There is certainly a great amount of "missionary work" to be done to educate the people concerning extracted honey. Some persons I find to be willfully and maliciously inclined to the opinion that it is adulterated. After exhausting all the arguments sufficient to convince any reasonable person ("There are none so blind as those that *won't* see"), they seem to prefer believing some sensational newspaper article, rather than the word of a bee-keeper who has had experience in handling and selling nothing but the pure article, well knowing that it is to his interest to put nothing but the very best on the market. Our reputation in this day of competition is worth much more than could possibly be obtained by the sale of a few hundred pounds of adulterated honey!

Some people persist in calling it "strained honey," when, at the same time, if they had troubled themselves to think one moment, they would know better. One groceryman whom I visited with a sample can, when asked if he wished to buy any extracted honey like the sample (which, by the way, was as nice as I got last summer, extracted in June), he replied: "No! I don't want any strained honey!" I told him the difference between the two; his next subterfuge was that bee-keepers "never extracted any honey that they could sell in the comb!" His insinuations were cut short by my reply, which was not at all complimentary to his judgment on honey-production. However, I never allow any one to make me lose control of my temper, although I meet with some who are certainly very exasperating, of which the above is a fair sample.

Another, a near neighbor who came after honey, approached me in a kind of a confidential manner, and wanted me to tell him what I put into my extracted honey. As there was no one present, I suppose he thought that he was going to be let into a *great* secret. Of course I told him nothing. "Then," said he, "why do you call it *extracted?*" I informed him that it received that name from the operation required to get it out of the comb, and *not* from anything put *into* or *about* it.

Others, on seeing a package of granulated honey, will innocently ask, "What did you put into that honey to make it become solid?"

Again, I have been told by some "knowing ones" that they thought that the "bee-business" was calculated for some one not anxiously inclined to work. What fallacy! Many a time have I been more tired at night after a day's work in the apiary, than I have been when binding grain in the harvest field. I could continue giving similar bits of experience, but I think that the above are sufficient, as it only corresponds with that of the fraternity.

I will offer some suggestions as a remedy: It would be a good plan for bee-keepers to attend our county and district fairs, take their extractors and some honey in the comb, extract it in the presence of all who wish to see, as there is not "one person in a thousand" in this vicinity that has ever seen a pound of honey extracted, and I suppose this locality is not an exception.

Another great help, I am quite certain, would be a liberal distribution of the "Honey Almanacs." If we can do something to popularize the consumption of extracted honey, it will repay us for making an extraordinary effort.

Perhaps all bee-keepers are not as partial to the product as I am, but as proof of my preference, I will say that on our table, "at a rough estimate," I do not think that we eat 10 pounds of comb honey in a year; while I think that we "get away" with about 300 pounds of extracted honey.

It is certainly a mistake to neglect to keep our home market supplied, instead of shipping our product to the large distributing points, to accumulate and perhaps break prices.

Duncan, Ills.

WINTERING.

Properly Preparing Bees for the Winter.

Written for the American Bee Journal

BY WM. ELLIOTT.

Mr. A. D. Ellingwood, on page 220, says that last fall he put 80 colonies of bees into his bee-house cellar, and that 40 of them were blacks, and the remainder Italians and hybrids; that the blacks were in the best condition to winter, and that the Italians and hybrids had as good a chance to prepare for winter as the blacks. He wants to know what aided the bees. I believe that I can enlighten him some by my own experience. I have learned that in the fall management of bees, it is very necessary to look after those colonies that have done the best, or produced the most surplus honey. I find that they are almost always short of stores for winter. The reason for this is that they have the most prolific queens, and they have kept the brood-combs well-filled with eggs and hatching brood, as every good queen ought to do.

It is very plain to see what is the matter with the bees, as the industrious hybrids and Italians were keeping the brood-combs clear of honey and storing in the sections, so that they could rear great numbers of workers to gather the harvest.

The blacks were storing in the brood-combs, all that they possibly could, only leaving a few small patches in the center combs for the not very prolific queen to lay in, and barely keep up the nominal strength of the colony. Thus it is very plain that the black bees would be in the best condition for winter, as they had stored the best of the honey in the brood-nest, or all they could of it.

It is also easy to see why the Italians and hybrids were not in such good condition for winter—their brood-combs were full of eggs, brood and feed for the same, well up to the last of the honey harvest. Of course, at the close of the harvest, Mr. E. came along and removed all their stores that was over the brood-chamber. It was at the close of the harvest, and there was not very much honey for them to gather: if there was any, most likely it was of a very poor quality—perhaps some honey-dew, or the juice from decaying fruit, or some stuff that they gathered at a cider-mill. Of course they could not help it, for there was no show for them to live through the winter on such unwholesome food, whereas, if Mr. E. had taken some of those empty combs out, and replaced them with combs of purer honey or sugar syrup, they would have wintered all right.

When I was overhauling my bees last fall, to prepare them for winter, I found the colonies that did the best (and they were pure Italians) were very scant of stores—so much so that they would not live half through the winter. I gave them frames of sealed honey, and fed them syrup made of the best granulated sugar; they are wintering well. If I had not fed them, I would have "killed the goose that laid the golden egg."

Plainview, Minn.

RIPENING HONEY.

The Importance of Having Honey Well Ripened.

Written for the American Bee Journal

BY C. THEILMANN.

Ripening extracted honey is a part of the Query 691, on page 165. It is quite surprising that none of the twenty responses give the true light, or the all-important point in which concentrates the true way of ripening honey, but nearly all circle around that point of most importance, viz: How can the water be evaporated artificially out of honey, without starting bacteria or fermentation?

Some of the replies to the query say that honey exposed in open vessels loses some of its qualities, and others say the reverse. Mr. Pond says: "Not if placed in a clean room, and properly cared for." This, I think, is correct; but how do we know that "proper care," without telling the readers how to do it?

Others say, let the bees evaporate the water! Mr. Demaree is one of them. I wonder if bees in Kentucky always ripen all their fall honey in the supers, when honey has ceased to come in, after a night's frost, and the nights continue to be cold. I know that bees in Minnesota do but little, if any, evaporating after this condition sets in; not only that, but they leave the supers, seeking a warmer place in the brood-nest below, and moisture in the supers will condense instead of evaporating from the warmth below and cold above. How, then, is Mr. Demaree going to get such honey ripe, and make it fit for a sensitive tongue and palate?

Mr. Doolittle says that honey in open vessels loses none of the flavor which it has when extracted. This depends altogether upon what condition the honey is in when extracted; but as the query stands, the answer is incorrect. If we take it for a fact, and it is not far from it, that as Mr. Heddon explains it, namely, that with thin honey with the temperature well up, bacteria or fermentation is produced, and Mr. H. also lets the bees evaporate it, but seals it air-tight soon after extracted, he, like Mr. Doolittle, I suppose, has all his honey ripened by the bees doing the work. I have not found it so in Minnesota, but we have to give Mr. Heddon credit for getting pretty close—almost getting his fingers on the all-important point of this evaporation business, but fails to get a fair hold of it.

I claim that, as a whole, there is but little, or none, of all the extracted, and but little of the comb honey, put on the market, which has its full value and keeping qualities, without going through an artificial procedure, and the quicker and the more effective it is done after taken from the hives, the better and finer in taste, quality and keeping powers it will be. These are not theories, but facts, as they have come under my observation and experiments.

Honey, sealed up air-tight, right from the extractor, will keep as long as so sealed, but as there is always some unripe honey in it, it will ferment more or less when exposed, and get that queer, sharp twange in taste, as Mr. Heddon calls it. In fact, it gets partly sour, and there is no way yet found to get that out of it again, and it is partly spoiled, and does much harm in the market.

Honey newly from the extractor, put into the cellar, or other damp places, or put in an ordinarily warm place with cool nights, in open vessels, will be almost sure to produce bacteria, and will sour; but take the same honey to a room in which the air is pure, and from 85° to 90° above zero for from three to five weeks, and the same honey will be the best of its kind in every respect that can possibly be produced. The same is true of comb honey. I have practiced this for the past two years, and my customers say that they cannot get such honey from anybody else. Even the late fall honey is thus made as fine as any of its kind.

I sent 11,000 pounds to Albany, N. Y., last fall (all dark honey), and a few weeks ago I received a letter from a dealer in New Jersey, who got some of the lot in some way, and wanted to know all about it, on account of its being so fine. Also the man in Albany was highly pleased with the shipment.

It will seem strange to some of the readers to be told that honey, or nectar, is most freely produced under the same atmospheric condition as is maple sap—the difference is only in the more warm season for the nectar; but sap and nectar, or green, unripe honey, are very much akin in nature.

Twenty or thirty years ago, when I used to make maple sugar and molasses or syrup, I learned that I would get but little sap if the atmosphere was not right; also, that when sap was slowly running, and partly evaporated in the sun and air, bacteria were produced, and that that sap could not be boiled down to sugar in any length of time, but boiled until it would almost be burned; it would be a sticky, tough mass, which had lost that fine, smooth, aromatic taste which maple syrup has, when boiled as soon as the sap comes from the trees.

I find in bee-culture, that we need similar atmospheric conditions for a big honey-flow, and the honey needs a similar treatment in regard to the quick evaporation, after it comes from the hives, as stated above about sap. If every bee-keeper, or honey-producer, would treat his honey as I have described, before putting it on the market, we would have no trouble in selling all we could produce, and also get a good price for it; and every producer of any kind of food, should take a pride not in the production only, but also in having the very best of its kind, that gives it the demand.

Theilmanton, Minn.

HONEY.

Is it Digested Nectar? Questions to be Answered.

Written for the American Bee Journal

BY S. J. YOUNGMAN.

In the olden time of the bee-gum and the king-bee, honey was honey, and honey only—it was strained honey. Ignorance was bliss—and this honey of our fathers' was a luxury at 25 and 30 cents a pound. No one doubted its purity; the bee-bread, larvæ, and other delicious(!) substances entering into its make-up, gave it a decided taste that there was no danger of mistaking. It was not "digested nectar" then.

Basswood honey, white clover and buckwheat honey, then were not known. Many of the old-timers miss the peculiar taste of their quondam days; and as they taste of the pure honey of the present day, they wisely (?) shake the head, and, as they smack their lips, they say, "That honey has got sugar in it. You can't fool me. We used to keep bees on the farm. I used to help father take 'em up lots of times in the fall," etc.

Now in respect to this question of digested nectar, although it has but little bearing on the pursuit of bee-keeping, and will probably not interest the mass of the reading public, it is like Banquo's ghost, and now that it is up, it will not *down* at any one's bidding.

Although not personally acquainted with Prof. Cook, I always read his books and articles with great interest and pleasure—never dared to doubt or presume that they were not a truthful insight into Nature and her wonderful laws; and I was astonished that the average bee-keeper would dare assail his position on the digested-nectar question; but as the matter is not plain to me, I would like to have the Professor, or any advocate of the theory, explain what I will now try to describe:

A number of years ago, I had a large number of bees, and there was a large field of buckwheat about one-half a mile away. Between the hives and the field was a rise of ground, where the bees flew quite near the ground. In the morning, when the sun was about two or three hours high, the bees could be seen to eject a liquid as they passed over to and fro from the field to their homes. Hundreds of cases of this were seen by myself, and others who were called to see this then (to me) strange sight, as I had at that time never seen any allusion to it in any of the bee-publications.

I have since often-times seen the same thing, in hunting wild bees. I always dilute the honey which the bees are to be fed on, and often while watching them circling in the air, preparatory to their direct flight to the tree, I have seen them eject a large amount of what they had undoubtedly just taken into their honey-sacs.

It is well-known that bees will gather nectar with but little trace of sweet in it, as, for instance, the sap of the maple tree, on which they will work greedily,and of which it takes 36 quarts to make one pound of sugar.

Can this separation, that I have described above, go on at the same time with digestion? or does the separation take place, and then the digestion? Is this surplus water ejected in a pure state, or is it excrement?

Lakeview, Mich.

[We respectfully refer these questions to Prof. Cook.]

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

April 16, 17.—Missouri State, at Marshall, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Successful Wintering of Bees.

My 259 colonies of bees are all right this spring. Only one colony was found to be queenless, and that was divided between two others. My colonies are all heavy in stores, and strong in numbers, the bees occupying from 5 to 7 spaces between the combs, when too cool for them to fly. Yet such a flattering condition of the bees is no evidence in itself of a good honey season. Predicting a *big* crop of honey does not have a tendency to improve the honey market. Mr. Doolittle's head is level on the size of hives for securing comb honey.

W. J. Davis, 1st.
Youngsville, Pa., March 28, 1890.

A Ditty for Bee-Conventions.

Here is a little ditty for bee-conventions; it can be sung to the air of "The Almighty Dollar"—a lively and very "catching" tune:

What makes the bees so busy?
  Is what I want to know.
Why do we observe on every hand,
In every normal colony
  To which we chance to go,
An eagerness we don't quite understand?

Why do queens and drones fly round,
And at last fall to the ground
  On pleasant days when Solomon is near?
Why do the guard-bees walk their beat?
It surely is no treat!
  This eagerness I don't quite understand.

Chorus—
It's for honey. Ain't it funny .
  How it drives away all sorrow and all care?
If you want money, you must have honey,
  For its honey that brings money everywhere.

Marlboro, Mass. E. L. Pratt.

Carniolan and Italian Bees.

I have had Carniolan bees for three years, and I do not find them so far ahead of the Italians as I expected. Some claim that they can get 25 per cent. more honey from them than they can from Italian bees, but I cannot. The Carniolans have one good point, that is, they are more quiet in winter than the Italians; but in every other respect, I think that the Italians are the best. The Carniolans are gentle—but I find no trouble with the Italian bees in that respect. If bees were my only object, I should keep Carniolans, for they like to swarm the best of any race that I have had anything to do with. My first swarm was from the Carniolans last year—it issued on May 30, and I had to feed them for a week. The first Italian swarm issued on June 9, and the Italians stopped swarming on July 9, but the Carniolans swarmed until the middle of August; that is after the honey harvest is past, and no honey is coming in. I made some large hives, but it did no good, for swarm they would—they would swarm when they had plenty of room in the hive. I find that the Carniolan colonies have plenty of bees in the fall, but not much honey. The Carniolans may gather more honey than the Italians in some apiaries, but they do not in mine. To those that think of trying them, I would say "Go slow, until you are sure they are the best." Some may say that I have not the pure Carniolans. If I have not got the pure Carniolan bees, they are not to be had in America.

Stittville, N. Y. John B. Avery.

Moving Bees with Small Loss.

About one inch of snow fell here yesterday, winding up with a big blow from the northwest. It was warm and sunshiny today, and so most of the snow is gone tonight. I have moved my bees about 110 miles by rail, and about 20 miles by wagon, with the loss of one colony out of 12. I am 18 miles due west of Omaha, near the Elkhorn and Platte rivers. Some linden timber is in reach of my bees, and plenty of willow, maple and cotton-wood.

W. H. Martin.
Elkhorn, Nebr., March 28, 1890.

Bees Restless in the Cellar.

I had 46 colonies one year ago, and secured 3,200 pounds of comb honey in one-pound sections, besides increasing my apiary to 70 colonies during the season, which I put into the cellar. I think that my cellar has been too warm (50 to 52 degrees) most of the time; the bees have been restless and noisy most of the time, and now the hives are getting quite spotted, but I hope to get the bees out in a few days.

A. M. Fisk.
Bessemer, Wis., March 28, 1890.

My Experience in Bee-Keeping.

I put 30 colonies of bees into winter quarters, most of them with plenty of honey for winter stores. I have three that have no queens, and I think that I will, as soon as it is warm enough, put them in with the other colonies. My last season's report was 300 pounds of honey from 18 colonies, spring count, and increased to 30. I lost 2 colonies with laying workers. I have 2 colones in the "Golden Bee-Hives." I changed the top of the hives so as to carry 24 one-pound sections. Bees work as well on the Golden frame as any, but I found that the hive most used was one that took the pound section. I have ceased using the Golden bee-hive. I made a hive similar to the Doolittle hive for a friend last season, who put a swarm into it the last of May, and he got 50 pounds of honey from that colony. It was a large swarm—that is where the great secret is, in having strong colonies. Last season I put one swarm in the place of the parent colony, and transferred the surplus on the swarm, and they kept on storing honey; if I had served all in that way, I would have had at least 100 pounds more honey. I shall save more that way this season. I was sick all the forepart of the winter, but now I begin to feel like myself again. I am an old soldier, and my health is never of the best. The Bee Journal is a great help to me. I think that the invertible frame is a good thing.

Ira Adamson.
Winchester, Ind., March 29, 1890.

Experience of an Old Bee-Man.

I think that I am one of the oldest bee-keepers in the northwest, and have had as much experience in the business as any one. I am the fifth generation that has constantly kept bees, but that does not say much for the business. I commenced to keep bees in 1824, when it was not so much of a science as it is to-day. I began with straw hives, hollow logs, then boxes standing on one end, with the "luck and brimstone plan" annexed to make it complete. I have kept bees in New York, Vermont, Massachusetts, Virginia, Pennsylvania and Wisconsin. There is a vast difference in localities—some much better than others. I am in the best place now, devoting my entire time to the business. I am an old painter by trade, and have followed it for 50 years. I was a foreman in a car-shop for 16 years, but I always kept my bees, and took time to care for them. I commenced bee-keeping here in 1850, and have tried to keep pace with the progress of the times. I was one of the first to adopt the movable-frame hive, and begin a new era in the bee-business. It has cost me much to experiment in the business, but I have managed to make the bees pay their expenses, and a profit besides. I have tried all kinds of bees except the Carniolan, and I expect to give them a trial the coming season. I have 76 colonies of bees at my home apiary, and 150 at out yards in the country, in five places. I keep a man at each yard most of the time during June and July. S. T. CRANDALL.

Hartford, Wis., March 27, 1890.

Spacing the Brood-Frames.

On page 214 Dr. C. C. Miller says that he is willing to give "something" to know how far to space brood-frames from center to center. What I know about it is not guessing; but years ago, when I wanted to throw up the box-hive, I had the dimensions of the Langstroth hive, but did not know how to space the frames, so I overhauled quite a pile of box-hives, took the tops off, and measured the distance from center to center across the combs, as the impressions were left on the top-board. These were the brood, with what I think must have been correct spacing. In each hive, where the combs were quite straight, they did not disagree, but were just 1½ inches from center to center. This was their own work, and I suppose they made them as they should be. I have 76 colonies now in the cellar. S. PLUMMER.

Mannsville, N. Y.

Method of Extracting Honey.

On page 198 is an article on extracted honey, when to extract, the number of combs to use, and how to proceed in extracting. Perhaps every bee-keeper in the land is well aware that there is no business that has more differences of opinion than the one of how to manage bees, or what kind of a hive to use.

My method of extracting is somewhat different from Mr. Funk's. He does not say anything about extracting from brood-combs. I extract from all the combs. My hive is only one story, holding 24 frames, 12x12 inches. Mr. F. does not extract until the clover season is over; I extract when my judgment says they need it—I do not wait until the honey season is over, but begin as soon as the combs are well filled and partly sealed over. I use a Bingham knife, and for a capping can, a box 2½ feet by 22 inches square, with a screen at the bottom, so that I save the drippings from the caps.

When I extract, I go to 4 or 5 colonies, and take out three or four frames from each. I generally use ten frames of brood, and the balance of empty worker comb, owing to the size of colony; then I have what I call a set of combs for extracting. I begin by removing all combs that have honey in, that will pay for extracting, and put them in another box for that purpose, placing the empty combs, and the brood taken from these other hives, into the hive that I have just emptied. I then shake and brush off the bees from the combs, and all is ready for business.

I do not care to extract when there is no honey coming in. To be sure, it can be done with a tent, but I believe I can do as much alone, when there is plenty of honey coming in, as two can with a tent and no honey being gathered. For storage for honey, I use two cans holding 400 pounds each, so that the honey has a chance, if it is not thoroughly cured, to ripen in this way. I always have a good quality of honey with this management. I had only one natural swarm last season from 40 colonies, and 2,100 pounds of honey. I use a sun wax-extractor, with which I believe I can produce as nice an article of wax as can be secured by any method.

Bowling Green, O. MILO GEORGE.

Superseding Queens.

I have read Mr. Doolittle's book on "Scientific Queen-Rearing," and tried his method of superseding queens, but did not succeed very well last summer. I placed in the upper stories of 20 colonies, above a queen-excluder, finished queen-cells; they hatched all right, and I withdrew the queen-excluder, but only 2 colonies out of the 20 superseded the old queens. Will Mr. Doolittle please explain through the AMERICAN BEE JOURNAL, wherein I failed? I think that the two that superseded were preparing to do so on account of old age. How would it do to leave the young queen above the queen-excluder until she commenced to lay, and then let her down?

Redwood Falls, Minn. WM. CROULEY.

[I do not know that I can account for the failure mentioned by Mr. Crouley, unless he did not put a frame of brood in each upper story with the queen-cell. As I have been short of queens from my multitudinous sales each year, I have not experimented along this line as much as I should have done under other circumstances, but so far as I have used the plan, I have had very few failures. Where the young virgin queen and the bees from the upper story have been shaken down in front of the lower story, as given on page 65 of "Scientific Queen-Rearing," I have not failed in a single instance in having the queen in the lower hive superseded, and I consider this the better way to work.—G. M. DOOLITTLE.]

Disagreeable Weather, etc.

We have had a very open winter, with rain, mud and slush, making the roads almost impassable. January and February were as much like summer months as like winter. The last of February was very springlike. The bees are in splendid condition, carrying in pollen and rearing brood. The apricot and peach trees were just bursting into bloom, but, alas, March came as fierce as a lion, and the mercury was 6 or 8 degrees below zero, and lasted long enough to store away a good supply of ice—a great luxury in the summer. Peaches and all other fruit, unless it be apples, were completely frozen. Maple bloom and everything from which bees can gather pollen are the same; so we will have to substitute flour, or something else, for awhile. March has only given us one real nice, warm day for the bees to fly. It has been cold and disagreeable in general, and it appears to be determined to go out as rough as it came, and usher April 1 in as a regular winter day. I had 35 colonies of bees last fall, which have wintered splendidly on the summer stands. My only loss, until the last of February, was two queens; and I doubled their colonies up with others. I do not believe that the bees here are in as good condition as they were one month ago.

I have had no return of foul brood in my apiary, and feel safe in saying that it can be effectually eradicated by keeping the bees for one or two days in empty boxes, and then putting them in perfectly clean boxes, on sheets of foundation, and effectually scalding and cleansing the boards, boxes and everything about the apiary.

Sulphur is recommended for killing off the bees that want to swarm. It must certainly be an unpleasant job for any one having any feeling, to first stupefy bees with sulphur, and then bury them alive! SAMUEL BARNHART.

Greensburgh, Pa., March 29, 1890.

Drones Flying—Salve for Piles.

The bees here are wintering well. Late swarms that did not lay up much honey, are starving, but those with plenty of stores thus far are wintering well. On March 19, I saw drones flying in my apiary. I have learned a new use for bees. A few days ago a man came to me, and wanted 20 bees. I wished to know what he wanted with them. He replied that he used them to make into a salve to cure the piles. He said that they made the best pile salve he ever heard of. NATHAN M. WOODMAN.

Bushnell, Ills., April 1, 1890.

Putting Bees into the Cellar.

In reply to Mr. S. H. Herrick, on page 204, I put my bees in the cellar on Nov. 26th to the 28th, and they came out in good condition. I have lost one colony in three years. I put 44 colonies into the cellar last fall; on March 20 I put 28 colonies out for a flight. It was 54 degrees in the shade, but it has turned cold again, and I have put the bees back into the cellar. I shall let the rest fly as soon as it gets warm. I know of bee-keepers that leave their bees out until Dec. 24, and those bees have wintered poorly. I know of one man that put screen-wire over the entrance of his hives the past winter, to keep the bees in. I think that man will have some empty hives this spring. I believe we are going to have a hard spring for bees in Minnesota. C. A. GOODELL.

Mankato, Minn., March 24, 1890.

Insect Pests on Fruit-Trees.

This is something of a fruit-growing country, and the question is being agitated as to the best means of destroying the insects which impoverish the fruit and the trees. The spraying of the trees with Paris-green is strongly advocated. The method mentioned on page 179 was referred to the Grange here, but it seemed to be something new to the members, and is not explicit enough. The questions asked in regard to it are mainly these: 1. Is it as effectual on all kinds of fruit-trees as poison? 2. When is the proper time to apply this yarn and turpentine? 3. How often is it necessary to apply it? 4. To what extent has it been practiced? 5. Has it been generally very effectual against all the classes of insects which prey upon the fruit-trees, or only a certain class? If the latter, to what class? Please give information as far as is practicable, to the foregoing questions, through the Bee Journal. There are so many unprincipled persons who are too hasty, or ignorant of the proper time, to use a poisonous remedy against insects on fruit-trees, that it would be a boon to the bee-keeping interest of the country, if such means as is referred to was generally known, and would give satisfaction.

Lyons, N. Y. Elias Richmond.

[By request, Mr. Brickey, who first mentioned the remedy in the Bee Journal, replies as folows to the above questions :—Ed.]

In answer to Mr. Richmond, I would say:

1. I have no knowledge of this remedy being tried only on plum-trees against the curculio, but if other fruit is affected by the same insect, or any insect that climbs the tree, it will be effectual.

2. Apply before the insect climbs the tree—at least before the trees bloom; it is better to be in time, if the application has to be repeated.

3. Parties that have tried it, say once a year; but it is easy to renew.

4. Mr. Wm. Bryant, of Audrain county, Mo., tried it in 1861, on about ten trees, and left one without the application, and all the trees on which the string and turpentine were applied, had a full and perfect crop of fruit, and the one not so applied, had no perfect fruit. I saw him again in 1867, and he said that he had kept up the experiment with perfect satisfaction, and without a failure, as to a crop of plums each year on every tree tried; also in 1868 and 1869. Also, a Mr. Liberty and Mr. Burton Yocom, of Tom, Mercer county, Ky., have both tried it, and say that it never fails on plum-trees, and they say they will try it on other fruit trees.

5. As stated above, it has been tried only on plum-trees against the curculio, but it will be tried here on all kinds of fruit, and I will gladly give any information that I can find out, to the fruit-growers and bee-keepers. I know of a case where Paris-green applied to Irish potatoes, poisoned a family. Peter Brickey.

Lawrenceburg, Ky.

Terrible Cyclone in Kentucky.

On Tuesday night, March 28, the cyclone wiped us out—struck us on the southeast corner, and raked to the northeast over 300 acres. It made kindling-wood and brick-bats out of buildings that cost $15,000; killed two members of our tenant's family who were in a two-story frame cottage. Our two-story brick residence, 14 rooms, was wiped out and scattered for six miles—our family all escaping unhurt; 110 colonies of bees "pied," mixed, scattered, and blown off; and the shop and honey-house demolished. We think that we have perhaps 60 colonies shaped up, and 75 colonies in another apiary all right. Now we have to reconstruct buildings and fences, and crops to plant. The prospect for white clover never was better. There were three buildings rubbed out on our place. Out of ten persons in the wreck, two were killed. It killed some hogs—10 or 15, perhaps, and one fine mare, our best, worth $200. It blowed the barn away, and left $1,000 worth of tobacco that was hung up inside; took a crib, and left 800 bushels of corn; took a granary, and left the wheat and oats, but scattered it; and destroyed three farm wagons, and all farm machinery.

E. Drane & Son.

Eminence, Ky., April 1, 1890.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

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☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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51D26t 1mly.

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4. The rates are low and the returns from advertisements are satisfactory.

HONEY AND BEESWAX MARKET.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demadn good.
HAMBLIN & BEARSS, 514 Walnut St.

MILWAUKEE, March 13.—The demand for honey is very good, and the supply is fair. We quote: White 1-lbs.,12@13c—and if absolutely perfect, sometimes 14c.; choice, white 2-lbs., 12@12½c.; dark 1-lbs., 10@11c.; old 1-lbs., 8@9c. Extracted, white, in barrels and half-barrels, 7½@8c.; in pails and tin, 8@8½c.; dark, in barrels and half-barrels, 6@6½c. Beeswax, 22@25c.
A. V. BISHOP, 142 W. Water St.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Mar. 13.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, March 22.—Fancy 1-lbs., 16c. Anything off-grade sells considerably below 16c. The market is bare of fancy, 1-lb. white honey. Extracted, 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

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FOR SALE—50 Colonies of Italian & Hybrid Bees, Extractor, etc.; House and 4 acres land, in corporate limits; good location for Poultry yards; within ½ mile 2 R.R. depots —Good honey market. Price, only $1,100.
15A1t MRS. A. SUTCLIFFE, Weatherford, Tex.
Mention the American Bee Journal.

I HAVE just bought two more Foundation Machines, and am now able to make Foundation of all kinds at the **lowest** price in the world. Send for sample and price to JACOB WOLLERSKEIM, Kaukauna, Wis. 15A1t
Mention the American Bee Journal.

WANTED A Competent and Honest Bee-Man without family, to take charge of our bees. We want a man for about $30 per month and board, who has proper recommendation. **E. DRANE & SON, Eminence, Ky.**
15A1t
Mention the American Bee Journal.

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11Atf LUTHER W. GRAY, ORLANDO, FLA.
Mention the American Bee Journal.

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IF YOU will let me know I will send you my Circular for 1890 which will tell you all about the Hive we are selling for **55c**; and if you want 25, can let you have them for **49c.** Also 100 Brood-Frames for $1.00.

WM. H. BRIGHT,
15A4t MAZEPPA, MINN.
Mention the American Bee Journal.

POOR MAN'S LANGSTROTH HIVE

Before buying Hives, send for our Price-List on this Hive as described on page 186 of this Journal. It is the BEST and CHEAPEST Hive made.

SMITH & SMITH,
14Atf Kenton, Hardin Co., Ohio.

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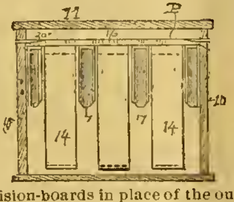
14A2t
Mention the American Bee Journal.

$1.50 Double Walled Hive.



I MAKE my improved Spacer with the downward-extending arms nearly as long as the end bars of the frames; and with suitable division-boards in place of the outside combs; a hive is converted into a double-walled hive, with the spaces at the ends of the frames closed, which is a great aid to a weak colony in building up in the spring, if the hive is well-packed on top of the frames. Price of Brood-Chamber and 8 Frames, $1.50; one Hive and one doz. extra Spacers, $4.00. Spacers, long or short arm, $20.00 per 100. These prices are for Frames ⅞-inch wide. When ordering give the width of your hive inside. J. B. WILCOX, Manistee, Mich.
15Atf
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WANTED AT ONCE—a man of some experience in apiary. References exchanged. ROSS & PARKER,
14A2t 700 West Street, Syracuse, N. Y.
Mention the American Bee Journal.

FOR SALE! Italian Bees and Queens, in small and large lots, at a VERY LOW PRICE. Address, OTTO KLEINOW, No. 150 Military Ave., Detroit, Mich. 12Atf

INDUSTRIAL HIVES! We manufacture Hives with latest and best improvements. Lyman Invertible, and Clark Union Brood-Frames, supersede old style Frames and Honey-Boards (see American Bee Journal, pages 163–204). Do not stock up with old-style goods. **SAMPLE** Industrial Hive, Langstroth size, complete, $2.35. Frames post-paid, 25c. Descriptive List of Fine Italians, &c., free. J. W. CLARK, Clarksburg, Mo.
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15A1t
Mention the American Bee Journal.

Choicest Italian QUEENS! **Purely** BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**
15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.
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1Dtf BELL BRANCH, MICH.
Mention the American Bee Journal.

PATENTS THOS. P. SIMPSON, Washington D. C. No atty's fee until Patent obtained. Write for Inventor's Guide
51D13t

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Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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CARNIOLANS AND ITALIANS.—I will, this season, run 2 Queen-Rearing Apiaries, one for Carniolans at Vawter Park, away from other bees, the other for Italians at Nappanee. Queens will be shipped in my new Introducing Cage, and safe arrival guaranteed. Tested Carniolan Queen, $2.50; Untested, $1.00, or 6 for $5.00; one three-frame Nucleus with tested Italian Queen, $3.00; Tested Italian Queen, $1.00; Selected Tested, $1.50; Untested, 75c.; or 3 for $2.00. For CARNIOLANS, address, I. R. GOOD, Vawter Park, Ind. For ITALIANS—I. R. GOOD & BRO., Nappanee, Ind. 13Dtf
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Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. April 19, 1890. No. 16.

In the changeful April weather,
Playing hide-and-seek togther,
Rain and sunshine, light and shadow through the woodlands come and go;
Now athwart the tree-tops glancing.
Now amid the violets dancing
In the quiet glades below.

* * *

☞ Mr. Henry Alley, of Wenham, Mass., wrote us on April 7, 1890: "Spring opened with April, and bees seem to be doing well."

* * *

☞ "Common-Sense Bee-Keeping" is the title of a 16-page pamphlet issued by Rev. A. R. Seaman, of New Cumberland, W. Va. We find in it more "common-sense" on various subjects than is usually found in similar publications. It is poorly printed, but it is readable as well as sensible.

* * *

Died, at his home in Versailles, Cattaraugus county, N. Y., Capt. H. Chapman, on April 8, 1890, aged 80 years.

This announcement will be read with sorrow and regret by the many readers of the Bee Journal. Mr. Chapman was widely known throughout the country as the one who first introduced to the public the celebrated "Chapman Honey-Plant." He was a man of sterling integrity, and his loss will be deeply felt in the community where he has lived for half a century.

* * *

Introducing Queens.—Mr. Dennis Cooley, of Globeville, Mich., asks:

> Please answer this in the American Bee Journal:
>
> Is it right to put a new tested queen into a hive as soon as the old queen is killed or removed?

If the queen is properly caged, she may be introduced at once.

* * *

Honey in the Pyramids.—Peter Moyer, of Orangeville, asks the following questions:

> 1. Have any of the readers of the Bee Journal any history about the preservation of honey in the pyramids of Egypt? About eighteen years ago I read a short statement about this in some paper. I would like a further account, if true.
>
> 2. How long can honey be kept in good condition?

1. Any one having the historic particulars will oblige our correspondent by sending them to us for publication.

2. Honey in the comb will generally granulate before the second honey season, and when that is the case, it cannot be liquefied without destroying the comb. Honey out of the comb can be kept for years in good condition.

* * *

Transferring Bees.—D. Cargill, of Maplewood, N. Y., writes thus:

> Please answer through the American Bee Journal these questions:
>
> How shall I transfer bees from one frame-hive to another, where the combs are built crosswise, or nearly so?
>
> Shall I cut the combs out and transfer the bees, or drive them out, on full sheets of foundation, and feed them until honey is coming in? There is not much honey in the combs.

Cut the combs out and transfer, in the same manner, as from a box-hive—all the features of a frame-hive having been lost by the combs being built crosswise of the frames.

If you prefer, they may be "driven" out and treated as suggested.

* * *

Bee-Spaces—Swarming.—A correspondent in Vermont writes thus:

> Please answer these questions in the American Bee Journal:
>
> 1. In using a metal queen-excluder, does it lay on the frames, or is there a bee-space between?
>
> 2. Which is best, to divide or let the bees swarm naturally, where there are 400 or 500 frames of nice, clean combs and you want increase, having only a few colonies left?

1. There should be a bee-space between the frames and the queen-excluder.

2. Some prefer one way and some the other, according to location, surroundings, etc. We should prefer to divide them.

* * *

Discoveries.—These questions are presented for reply in the Bee Journal:

> 1. Do you think a bee-keeper serves his best interests by publishing all his discoveries, and freely giving his inventions for the benefit of all?
>
> 2. If so, please briefly describe what you consider our most important invention or discovery made within the past year or two.—One Who Wants to Know.

1. Perhaps not, but there are times when it will not pay to secure all rights to himself. The amount of revenue could not be made to pay for a patent.

2. This opens a question which would not be pleasant to discuss in the Bee Journal.

☞ The "Ram's Horn" is the title of a large weekly religious newspaper just started in Indianapolis, Ind., at $1.50 a year, by Elijah P. Brown, who, having achieved a national reputation as a newspaper man, has lately been converted, and now begins an *earnest*, spicy, and interesting religious paper for the home. The editor's salutatory remarks thus:

> Our constant endeavor will be to make religion attractive, and try to show that it is full of sunshine, hope and love. We want everybody to find out that God is the friend of all that is good and true.

That is just the kind of religion we believe in—just the kind that will do the most good in the world, and we wish the *Ram's Horn* abundant prosperity.

Send to Brother Brown for a sample copy, and see if you do not want it every week.

We will supply the *Ram's Horn* and either of our Journals for $2.25 a year. Or all three for $3.00.

* * *

In California, the bees have been swarming ever since the latter part of March, writes Mr. Gustav Bohn, of Messina. He adds: "I expect a fair crop of honey this season. My neighbors, the raisin-growers are pulling up a great many of their vines and planting oranges, which will pay better here; so I shall not be likely to have any more trouble with them." It will be remembered that the Union defended Mr. Bohn's case, and proved that the bees had rights which the raisin-growers should respect. The bees are now "on top," and their rights are acknowledged even by their late enemies. So much more to record in favor of the National Bee-Keepers' Union's defense of the pursuit.

* * *

Spring Weather.—While we write this the weather is balmy and spring-like here in Chicago. Mr. W. Addenbrooke, of N. Prairie, Wis., wrote us as follows on April 8, concerning the spring weather in Waukesha County, Wisconsin:

> This is the first day of spring weather. It is now, at 10 a.m., 65 degrees in the shade. We had heavy thunder showers last night for a few hours.
>
> I put 120 colonies into the cellar on Nov. 21, 1889, and put all out alive but two on March 21, 1890. They are now in good condition, and I hope for a good season.

* * *

☞ Mr. W. Richter, of San Bernardino, Calif., died on March 25, at his bee-ranch. His bees were purchased by Mr. La Rue, his near neighbor, who will hereafter manage that bee-ranch.

* * *

New Catalogues and Price-Lists for 1890 are received from—

E. D. Keeney, Arcade, N. Y.—4 pages—Italian Queen-Bees.

Alfred E. Cole, Plainsfield, N. J.—14 pages—Seeds, Plants, Bulbs, etc.

GLEAMS OF NEWS.

Painting Hives.—Relative to the remarks of Mr. Theilmann, on page 217, on the disadvantage of painting hives, Prof. A. J. Cook writes as follows:

> Mr. C. Theilmann, in the AMERICAN BEE JOURNAL for March 29, asks why the experiments to show that wood was porous were made. They were made to show that our houses are ventilated to quite a degree if made of wood. Papering destroys this ventilation, as does painting in a large part. I believe there is something in what Mr. Theilmann says. Certain it is that unpainted hives are better ventilated than painted ones. If, however, hives are painted white, they would absorb less of the sun's heat in summer, and so the combs would be less likely to melt down than they would in the darker unpainted hives.
>
> I am free to say, that were it not for looks, I should think it wiser to use unpainted hives. Surely, paint does not preserve the wood enough better to pay for the expense.
>
> The same is true of our buildings; yet I paint my buildings, and keep them well painted. This gives an appearance of thrift and neatness that is pleasant to me and to all passers-by.
>
> My sugar house in my maple bush is off from the road in the woods, and is not painted.—A. J. COOK.

Vienna Congress.—The Secretary of Agriculture is in receipt of a communication from his Excellency, Chevalier von Tavera, Envoy Extraordinary and Minister Plenipotentiary of Austria-Hungary to the United States, advising him of an International Agricultural Congress to be held in Vienna in conjunction with the Agricultural Exhibition which is to take place there this summer, and enclosing copies of the programme for said Congress. The programme indicates that the Congress will meet during the first days of September, 1890.

Inasmuch as the programme suggests that applications for membership must be received by the Committee before the end of April, and as the time therefore is very short, the Secretary of Agriculture tenders his good offices to secure membership for those whose applications cannot reach Vienna before the date mentioned, provided they will forward the same with the necessary enclosure to him.

Eggs-actly!—A correspondent who signs himself "Goshen," asks this question:

> In your opinion, would it be preferable, when mentioning the different eggs laid by a fertile queen, to use the terms "egg queens," "egg drones," and "egg workers," as suggested by Prof. John Phin, in his "Dictionary of Practical Apiculture," instead of queen eggs, drone eggs, and worker eggs?

While the general adoption of the terms may not be realized, we agree with Prof. Phin, when he says, "the terms egg queens, egg workers, and egg drones express the facts precisely."

Moving Bees.—Samuel Wilson, of Cosby, Tenn., propounds these questions:

> I desire to move my bees about June 1, to a better field, and would like to have these questions answered in the AMERICAN BEE JOURNAL:
>
> 1. Would it not be better to move them on a light night?
> 2. Would you tack wire-cloth over the entrances, or entirely close the entrances?
> 3. Would you tack wire-cloth over the entire top of the hives?
> 4. Do you put them two tiers high, and if you do, how high must the second be raised above the first tier? The road to move them over is very rough and rocky.
>
> SAMUEL WILSON.

Our reply to the several questions is as follows:

1. Any time when the bees are not flying will do.
2. Tack wire-cloth over the entrances.
3. Fasten the frames so they cannot slide together and kill the bees; then tack muslin over the frames.
4. Yes. Raise the upper tiers by putting inch strips of wood across them.

Secure the load well so that there will be no danger of shifting.

Flowers that Have Odors.—It is surprising that among the innumerable varieties of specimens found in the floral kingdom, there are so few that possess any fragrance whatever, to add to their attractiveness. It has been discovered that of 4,200 kinds of flowers which grow in Europe, only 420—one in ten—are odoriferous. The white flower is most common, there being 1,194 kinds of that; and less than one-fifth of these are fragrant. Of the 951 kinds of yellow flowers, 77 are ordoriferous; of the 823 kinds of red ones, 31 have odors; and of the 308 violet-blue kinds, only 13. Of the 140 kinds with combined colors, but 28 are fragrant. It would be interesting to know just how many of the flowers visited by bees, emit any odors. Here is a delightful field of investigation for students of botany.

Arbor Day.—The Secretary of Agriculture has issued a circular, No. 5 of the Forestry Division, giving instructions on tree-planting for purposes of Arbor Day. The circular, which is a reprint of one compiled last year by Prof. B. E. Fernow, Chief of that Division, is intended primarily for use in Eastern States, but the general principles stated to be observed in the choice of trees, the treatment before transplanting, the method of planting and after-care are applicable everywhere, the only difference for other regions being the choice of season, and of kinds to be planted. Send to him for a copy. Address, Hon. J. M. Rusk, Washington, D. C. Plant lindens everytime.

☞ "Frank Leslie's Illustrated Newspaper" last week presents six pages illustrative of the disaster at Louisville, Ky. The pictures are full of interest.

Cuckoo Bees.—An account of these insects, as seen in some Indiana apiaries, is given in the following paragraphs from an exchange:

> At a meeting of the Hamilton County (Ind.) Bee-Keepers' Society, complaint was made of a little black bee which robbed apiaries, in portions of Indiana.
>
> Advice was given to re-queen colonies, and close the entrances of the hives thus troubled. But the members said they had tried that, and the robbers still ran in, and the best colonies did not refuse them: that they even came in streams, pouring into the hive.
>
> Much interest was once shown in the matter, and in the discussion which followed several declared they had seen it "hatch" from a cell in a hive of Italian bees. This seemed impossible, unless it was simply a hybrid.
>
> The Chairman then wrote to Prof. Cook, who reported that he thought it must be a sort of solitary insect (as the description sent him said that strong efforts to tree them had failed), they did not cluster like bees. This was reported to the Society, but they wanted more definite information, and went to a colony close by and secured two specimens, which were sent to Prof. Cook, who said that they were probably what are called "cuckoo bees." They lay their eggs in the cells of other bees, and allow the foster-mother to hatch and feed them. Our bees do not fight them.
>
> The "cuckoo bees" have no pollen-baskets, and do not gather honey, but depend upon the fooled foster-mother to warm and care for the young. The Society has reports of damage from it east and west, as far as their membership goes; but south and southwest, it has not been recognized, even by those having 75 to 100 colonies.

Prof. Cook mentions these robbers—the cuckoo bees—in his excellent Manual of the Apiary, on pages 29 to 34. They belong to the family of Apidæ, but they are "the black sheep" of that family.

Fruit Prospect.—We are not scared about the fruit outlook for this season, whatever the reports from elsewhere. The buds are yet all right, and if nothing unforeseen happens, no late frost like that of last year, no hail, etc., we will not be likely to go without fruit this season. We know the scare is great all over the continent, but the damage is hardly ever quite as serious as it has the appearance at first.—*Popular Garden.*

Convention Notices.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. FULLER, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, *Sec.*

Bee-Keeping in Washington.—Mr. John Boerstler, Vashon, Wash., writes as follows in relation to Washington as a bee-country:

VASHON, Wash., Jan 25, 1890.

The enclosed is taken from the weekly *Post-Intelligencer* of Seattle, Wash., and shows what Mr. A. C. Allen thinks about bees in Washington. His location is not over 50 miles from where I am living, and I think that I shall soon know more about the bee-pasturage. I do not want to make any guess-work about it when I report, for this is a new country, and not settled as thickly as in some other parts of Washington, but I think that we stand a good chance for a bee-country, as the winters are mild, and the seasons long. I had too many swarms to get much honey last year, but my 5 colonies yielded $15 in honey, bees and swarms. I have lost 3 of them by being queenless, and 2 from not having honey enough to winter on. I think the others are all right, on the summer stands, protected with 4-inch cushions.

JOHN BOERSTLER.

Here is a part of the article referred to by Mr. Boerstler, and published in the *Post Intelligencer:*

The honey resources in the country are good. Early in the spring the flowers begin to bloom. The chick-weed and other small plants begin to bloom in February and March. The wild plum and a great many other plants also bloom in succession until about the first of April. The soft maple blossom, which is a good flower for yielding both nectar and honey, blooms early. Next is the vine maple, which the pioneer so much dreads to clear from off his homestead. In my opinion it is the greatest honey-yielder of any flower of its size under the sun when everything is favorable.

I have seen the nectar hanging in drops from the beautiful little cluster of flowers, and taken my knife-blade and gathered drops sufficient to get a good taste of vine-maple honey. During a warm, dry spring there are tons of vine-maple honey that go to waste because there are not bees enough to gather it all. Next comes the white clover, which blossoms all summer, but has greatest amount of honey during the month of June. In the latter part of the summer the hardhack, fire-weed, golden-rod, asters, and many smaller plants, both wild and cultivated, bloom until frost. I sow buckwheat for my bees, and I find the silver-hull the poorest grain yielder, but the best honey-plant of any that I have tried. I am at present cultivating several other plants for the purpose of ascertaining their honey productiveness. The bee-balm and catnip is very good.

Last year the Commissioner of Agriculture sent me a package of the Chapman honey-plant seed, which I planted, and it bloomed the first of July, this year, and continued to bloom for about four weeks. The honey oozes out of the bloom, and I have seen five bees on one ball at the same time. This plant is of the thistle family, and is called the "ball thistle" in Europe. It is a perennial plant, and has a seed very much like a grain of rye. I am sure it will pay very much to cultivate it for the honey alone.

Though we may have to cultivate more plants, I am confident it will pay to keep bees in this country. Bees are one of the essentials in fruit-growing. Every well-informed horticulturist knows that if the weather is so the bees cannot work on the flowers to fertilize them, the crop is a partial, if not a total, failure.

A. C. ALLEN.

QUERIES and REPLIES.

Distinguishing Pure Italian Bees and Hybrids.

Written for the American Bee Journal

Query 702.—1. What constitutes a pure Italian bee? or how can one be distinguished by its marking? 2. How can a hybrid be distinguished?—X. Y. Z.

See Prof. Cook's article on the different races, on page 39.—H. D. CUTTING.

1. See my essay read at the Michigan State Bee-Keepers' Convention on page 39. 2. The workers do not all show the three bands.—A. J. COOK.

1. The bees in the hive should *all* have three yellow bands. 2. At least some of the bees will have less than three yellow bands.—C. C. MILLER.

1. One that has three well-marked yellow bands. 2. If you refer to queens, they must in addition, produce all well-marked workers and drones.—C. H. DIBBERN.

1. The Italian bee is a *thoroughbred*—not a pure race. The yellow bands, on the abdomen of all the workers, is the test given. 2. By a part of the bees being yellow, and a part black.—G. M. DOOLITTLE.

1. One that has only pure Italian "blood," and has three yellow bands. All bees with three yellow bands are not pure Italians. 2. All hybrids cannot be distinguished from pure ones. A hybrid may be black, or have one, two or three yellow bands.—A. B. MASON.

1. Three distinct golden bands, adhering tenaciously to the combs, and "bouncing" the moth-worm with neatness and dispatch. 2. By its darker color, dimness of the bands, and, usually, by its lack of amiability.—MRS. L. HARRISON.

The three yellow bands on all of the workers are reliable, as a rule. If many are seen with only one or two bands, they may be hybrids, and show an ugly temper. Pure Italian bees, if rightly handled, are not vicious.—G. L. TINKER.

1. One whose ancestors on both sides have been bred from pure stock. The markings are three or four distinct yellow bands. 2. As many hybrids will have three yellow bands, it is only by inspecting the parent colony that we can detect them.—J. M. HAMBAUGH.

1. One that comes from Italy, or one bred from pure Italians. I doubt if they can always be distinguished by their markings. Popularly, they are supposed to show three yellow bands. 2. I do not believe that they can be always. I cannot always tell a "grade" from a pure-bred short-horn.—EUGENE SECOR.

I have had colonies undoubtedly crosses between the Italian and the black races, which the best of judges would have unhesitatingly pronounced fine pure Italians, but such crosses can generally be distinguished by their color. I think it impossible to distinguish pure Italians with certainty.—R. L. TAYLOR.

1. A pure Italian bee is one that has no impure "blood." One can be distinguished by "faith" and plenty of yellow bands. 2. A hybrid can be recognized by a "lack of faith" and a lack of the yellow bands, provided there is a great destitution of color. Of course, you cannot tell whether the Italian is mixed with Carniolan, German or what all.—JAMES HEDDON.

Pure Italian workers are distinguished by having the three segments of the abdomen next to the thorax, of a color from a dark leather to a bright yellow. These three yellow rings are very conspicuous when the abdomen is distended. They are less prominent in very young and in very old bees. Hybrids only show one or two of the rings when the abdomen is distended.—J. P. H. BROWN.

1. Bees that are very quiet when handled; that hold tenaciously to their combs; that fight robbers and bee-moth to the death; that thrive when common bees perish, and carry uniformly three yellow bands, are called pure Italian bees. 2. Hybrids are not like the above, although they may show from one to four bands of yellow in the same colony.—J. M. SHUCK.

1. A pure Italian worker-bee is the progeny of a queen whose whole worker progeny will show three distinct yellow bands on the abdomen, when they are filled with nectar. 2. A hybrid may, or may not, have three distinct bands, and we can only decide on purity by examining all the bees of a colony. If a queen produces a colony, a part of which shows two bands, a part one band, and a part three bands, such bees are *all* hybrids (so-called), although some may show three bands.—J. E. POND.

1. Of course, a pure Italian bee is one that has no mixture of alien "blood." It is not possible to tell, in all cases, whether Italian bees are absolutely pure or not. A colony that is uniform in color and markings, all the workers having not less than three yellow bands, is probably pure. But all pure Italians are not uniformly marked. 2. If the marking and color are irregular, the bees are probably not pure. "Hybrid" is an unscientific and incorrect term. There are no "hybrid" bees, any more than there are "hybrid" horses, cattle and sheep.—M. MAHIN.

1. A pure Italian bee is a bee that has been purely bred from stock imported from Italy. The stock must be such as were evolved there by nature, uncontaminated by any of the modern crosses. After their importation to this country, where they are likely to mix with the common black race, we say that a pure Italian bee when young and in good health, must show three yellow bands around her abdomen. But if there is a mixture of "blood" from the Cyprian or Syrian races, we are left "at sea." 2. A hybrid colony is known by their mixed color. Some of the bees will look like Italians: others like hybrid bees, and with intermediate markings.—G. W. DEMAREE.

Honey as an "Eye-Water."—Among the various excellent uses of honey is that of a remedy for sore eyes, or eyes that may be affected in any disagreeable way. The following paragraph, from the *Breeders' Gazette*, evidently given in reply to a question about sore eyes in a horse, may be suggestive to our readers, many of whom are interested in horses:

I would suggest that a few drops of pure honey be dropped into the horse's eyes daily, or twice daily. It can do no harm, and I have known some remarkable cures by using honey alone. Let one person hold the horse's head, and turn it a little to one side, while another opens one lid and drops in a few drops of honey. It may effect a cure. I think it worthy of a trial with any eye in horse or ox that is sore from any cause. If the honey is too thick to run freely, it can be warmed a little, which will thin it so that it will flow freely, but care should be taken not to heat it to more than blood heat. New honey will not require heating.

CORRESPONDENCE.

VISITING.

An Account of a Tour Among the Bee-Fraternity.

Written for the American Bee Journal

BY REV. WM. F. CLARKE.

The kind "personal" on page 211, referring to my little visit with the Editor when in Chicago the other day, calls for a word or two of correction and explanation from me. I am spoken of as President of the Ontario Bee-Keepers' Association, which is not quite correct. I had the honor of filling that office last year, but my term expired in January, and the chair is now occupied, and most deservedly, by Mr. Allen Pringle, one of our ablest Canadian bee-keepers—a highly intelligent, scholarly man, a good speaker, and a forceful writer. I wish he were better known to the bee-keeping fraternity, and I trust he will be, but he is a modest, retiring man—needs pushing, to get him before the public.

Then as to that "crutch." It is a rather pathetic picture of me which is presented, and suggests, "Pity the sorrows of a poor old man." It was, however, a true picture at the time, for, owing to a fall I got in the early part of my journey, I was compelled to obtain a crutch after my arrival in Chicago, and, much to my chagrin, had to go on it the rest of my tour; but, I am glad to say, I have been able to dispense with it since my return. The sciatica, and need of a cane, still remain.

My trip took me first to the annual meeting of the Western Ontario Bee-Keepers' Association, which was held on March 13, at Essex Centre—a brisk little town 17 miles east of Detroit. Though the roads were at their worst, we had a fair attendance, and some interesting discussions. The members of this body are an enterprising, progressive class of bee-keepers.

It may surprise the readers of the AMERICAN BEE JOURNAL, to learn that one of the topics discussed at this meeting was the honey exhibit to be made at the World's Fair in 1892. We Canadians are a unit in favor of Chicago for that great event. Foreigners cannot see America by visiting New York. That's only Gotham. To see the continent that Columbus discovered, people must, at least, go as far west as Chicago.

I must congratulate the AMERICAN BEE JOURNAL and its enterprising proprietors on their removal to the centre of the city, and on the commodious quarters now occupied by them. I always felt it a long pilgrimage, even by street-cars, to 925 West Madison Street. It meant two hours time, going and returning, when your business lay, as it usually does, in the heart of the city. The office is now within 100 numbers of its original location, when I removed it from Washington to Chicago, in 1872. It was then 146 East Madison Street. It is now 246, on the same side of the street. I see only one objection to the present spot, viz: Being easily accessible, it may be frequented by bee-men of leisure, who happen to be in Chicago, and do not know the value of a city man's time. A hint to such may not come amiss.

> "Call upon a man of business;
> In hours of business;
> Only on business;
> Transact your business,
> And go about your business;
> In order to give him time, to attend to his business."

If the only objects of the call are to see the Editor, shake him by the hand, speak a cheery word, and see where the AMERICAN BEE JOURNAL is concocted—that's the "business" of the occasion; do it, and depart, leaving the Editor aforesaid in a happy frame of mind, and firmly persuaded that you are a person possessed of some common-sense. I may add (but friend Newman can skip this), that he used to be a good-looking fellow before *La Grippe* got hold of him; but he has evidently had a severe mauling by that mysterious visitor, and the barber, no doubt thinking they did not match his haggard visage, has cut off the beautiful, twirling ends of his mustache, giving his face a very shorn and shrunken appearance. Seriously, and with fraternal sympathy, let me say, that family affliction, as well as *La Grippe*, has ploughed furrows in his countenance. All who read this will join in the hope that the shadows may soon betake themselves from his household, his hollow cheeks fill up, his mustache assume its former jaunty curves of manly beauty, and "Richard" be "himself again!"

But I must get on with my tour. In returning, I spent a day with Mr. Heddon, who, fortunately for me, was "under the weather," and obliged to stay in the house, not having fully escaped from the clutches of *La Grippe*. He is such a busy man when quite well, that one can only talk with him by jerks. Owing to that plaguy crutch, aforesaid, I couldn't run around with him to the bee-yard, work-shop, *Times'* office, and others of his haunts. At home, I had him pretty much to myself all the time that I was there, and did not have to take him "on the fly."

Well, Mr. Heddon looked quite haggard, too, and not unlike that first picture of him that appeared in the bee-papers, and which, he thought, made him look like a "live corpse." But he, like friend Newman, will doubtless get back his good looks in time, and become "killing" again.

The greater part of the talk two bee-men have when they get together, is unreportable for a variety of reasons, and I can only touch on a few topics that we discussed, viz:

WINTERING BEES.—I think the lessons of the past winter have made Mr. Heddon incline to a better opinion of out-door wintering. He frankly admitted that his out-door colonies have done by far the best during the past winter. The cellar-wintered colonies show some signs of diarrhea, but the out-door ones are entirely free from it. Of course, the season has been an exceptional one, but I would like to see Mr. Heddon become a complete convert to the out-door method, if for no other reason, because I am satisfied it is one of the many good points of his new hive, that, being shallow, it economizes heat. For the same reason it is a good hive for spring, being favorable for early brood-rearing. I have wintered rather weak colonies out-of-doors in the half brood-chamber, and had them come out stronger in the spring than they were in the fall.

THE NEW HIVE.—Judging by the testimonies given in his circular, which I read just before starting on my tour, my own experience and observation, together with what I gleaned from Mr. Heddon himself, I am of the opinion that the new hive will be popular only with a select class of bee-keepers. It requires a nicety of mechanical construction which few bee-keepers can attain who make their own hives, as I suppose the majority do. It does not admit of any slouchy, go-as-you-please management. Not much manipulation of it is needed, but it must be done just so, and in the nick of time. The bee-keeper who uses it must be quick to see at a glance the state of things, know by instinct what is to be done, and do it right there and then. I frankly own that my chief reason for liking the new hive, is that I prefer to handle hives instead of frames.

THE THICK TOP-BARS.—Mr. Heddon showed me some old, weather-worn frames, with thick top-bars—relics of the "long ago." I have some myself. They were used in the Thomas hive, which I had as far back as 1864. I did not find them effectual preventives of brace-comb building. The close honey-board placed just above them with only a bee-space between them, was often fastened with comb along almost the entire surface, and came off ragged with fractured comb, requiring a lot of scraping before it could be put down again. The slatted honey-board will obviate this, but so it will with a thin top-bar. I would have the top-bar thick enough to prevent sagging—no more. There are fashions in bee-keeping as well as in dress, and ever the old styles come up again, and are looked upon by the younger people as the latest novelties, whereas the veterans know that they are the old styles "made new."

THE BEE-ESCAPES.—I was describing three samples of those I saw in the BEE JOURNAL office, and expressed the opinion that they were too labyrinthine, and required too much cuteness on the part of the bees in order to get out. My notion of a bee-escape is, that it should rather tempt and coax the bees to get out, and make it difficult for them to go in. I was glad to find that Mr. Heddon agreed with me.

SELF-HIVERS.—I doubt their uniform working according to the doctor's orders. So does Mr. Heddon. But, no doubt, many of them will be tried the coming season, and "we shall see what we shall see."

SPECIALISM IN BEE-KEEPING.—Mr. Heddon's faith in this is unshaken. When I told him that Mr. Hall had been led by the stern logic of three poor seasons to contemplate combining something else with bee-keeping, he merely said, "He'll rue it."

Mr. Heddon is full of electricity—he always was, for that matter, but I mean he is full of the science. His son William has become an expert in practical electricity, and it has switched him off from bee-keeping, so that his father loses his best helper among the bees. William has charge of the electric lighting system in Dowagiac, which, for the uses of a small town, is the best I have seen. The incandescent lights are now in operation in Dowagiac, and I own that I was surprised to note the illuminating effects produced by 100 such insignicant-looking lamps. The arc lights being so high up, there is a good deal of waste skyward, where, until people learn how to fly, artificial light is not needed. Mr. Heddon's house is lit up throughout with these incandescent lamps, and it is very nice to be able to ignite or put them out by the simple turn of a button.

From Dowagiac I went to Flint, where I have a son living, who has charge of the Armstrong Manufacturing Works—a branch of similar works in Guelph. It is one of the beauties of our international tariff, that an inventor in this country must either sell his patent to some one in the United States, or go there and start a similar enterprise. The branch in Flint is bigger than the parent tree in Guelph, and so we lose the inflow of capital which might, and ought, to come here, if the frowning customs wall did not shut it out.

Of course, I called to see Mr. Hutchinson, but could only make a short visit. I found him in his shirt-sleeves, busily at work in his printing-office, where he is editor, foreman, compositor, and devil. The office is connected with the sitting-room by one of those draped archways, which are "all the go" now-a-days. I saw Mrs. H. and the olive-branches. (N. B., one of them is an Ivy.) Their home must be a very pleasant place in summer. The cosy family air inside would indicate that it is pleasant in-doors all the time. Mr. H. looked well. The "grip" has dealt more gently with him, than with most of its victims.

We talked mainly of the *Review*, and I gave him "free gratis" my opinion of it, which cannot, in full, be quoted here. But this much I may say, that, in its establishment, Mr. H. has shown a vast amount of tact and pluck; that it has made a niche for itself; and that, like the new Heddon hive, it will attract only a select class of bee-keepers. Alone, it would not fill the bill, but is a valuable supplement to our bee-literature. It is an *addendum* rather than a rival to other bee-periodicals. It has evidently come to stay, as it is past the critical stage, and is beginning to pay fairly well. Mr. H. is at home very much as he is at conventions, all eyes and ears, but says little. He looks you all over and through, draws you out with leading questions, and forms his own mental conclusions. He makes me think of Burns' couplet:

> "A chiel's among ye, takin' notes,
> An' faith, he'll print 'em !"

I do not know whether he got anything worth having out of me, but I know that I did not get much out of *him*, and I felt pumped-like when I left. He is a pleasant, genial fellow whom you cannot help liking, whether or no. But the readers of the AMERICAN BEE JOURNAL will be saying, "That Clarke's as long-winded as ever." So I'll quit, right here.

Guelph, Ont.

* * *

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, postpaid.

BEE-ESCAPES.

A Comparison of the Horizontal Bee-Escapes.

Written for the American Bee Journal

BY C. H. DIBBERN.

The horizontal bee-escape! Much has been said, and many misleading articles have been written, and published, as to the inventor of this style of bee-escapes. On page 798, of the AMERICAN BEE JOURNAL for Dec. 14, 1889, I published the first description with a cut, though a poor one, of my horizontal bee-escape, and as far as I know, it was the first description of a horizontal escape ever published.

Of course, as I had anticipated, a number of modifications of this invention soon appeared. Now if bee-keepers will carefully examine these various escapes, and compare them with my published patterns, they will readily see that they are but modifications of mine.

Mr. Reese, on page 231, says that I claim the horizontal arrangement under a hole in a board, and in the bee-space, etc. Now no one knows better than Mr. Reese, that I have a right to make this claim, as I sent him the first diagram and description of such a device that he ever saw. Not only do I claim the escape in a bee-space, but in the thickness of the board, only ¼ or ⅜ of an inch thick; and what is still better, one that is instantly removable from the top, without taking off the board, or disturbing the bees. If Mr. Reese will examine the model sent him, which he pronounces good, he will see that it is just that kind of an escape, and is not placed in the bee-space at all.

I have not much to say about Mr. Reese's last escape, as it is patterned after my No. 4; it is not so bad, only he nails it in a board, where it is to remain when used as an inner cover to worry and annoy the bees. We are consoled, however, by the assurance that we can scald, or build little fires, and burn the propolis off the escapes which the bees will be sure to put there. I think that Mr. R. has his outlets to the escape too small, being only about the size of a lead-pencil.

I also take exception to Mr. R's statement, that testing escapes by means of feeding or robbing, really proves nothing. There are no bees so persistent as robbing bees, and when I place the escape, reversed, on a hive that is being robbed by thousands of bees, and in an hour find that robbing has entirely stopped, I am satisfied that no bees can find their way back through the escape.

The only other point on which any question can be raised, as to the perfect working of these escapes, is whether they will sufficiently draw the bees down to the main hive, or under super. We experimented last season with small cones placed in one-inch holes, and found no trouble. Our standard escape has as great capacity for allowing bees to pass through as the old style Reese escape, and as it is provided with wing guides, we are certain that there will be no difficulty on this point.

Of course, the horizontal escape can be made in many forms, and as a curiosity I send to the BEE JOURNAL office my latest design; I do not think that this is any improvement on my No. 4 outlet escape, as I doubt if it can be much improved, only we want it in the Museum of the AMERICAN BEE JOURNAL, as some of these days some one will be claiming it as a spang new invention.

I am glad to see this matter thoroughly discussed, many designs being brought out, and bee-keepers will certainly be greatly benefited.

Milan, Ills.

[Mr. Dibbern's latest design of bee-escape is received, and has been placed in our Museum, with the date printed on it.—ED.]

SHIPPING-CRATES.

The Size of Crates for Shipping Comb Honey.

Written for the American Bee Journal

BY DR. C. C. MILLER.

It is a dangerous thing to run athwart any opinion with C. F. Muth's name attached—not on account of the belligerent character of the man, but because he has had a wide experience, and is not likely to advance any opinion that he cannot well substantiate. Nevertheless, some things may be said in reply to what is said about shipping-crates on page 214.

It is not certain that just what is best for the Cincinnati market, is best for all markets. Mr. Muth has succeeded in popularizing granulated extracted honey in his market, so that it is preferred, if I mistake not; while it is well known that in some other markets granulation hinders sales. If in any market a large part of the honey is sold to private families by the crate, then a 12-pound crate is better than anything larger, and in some places I suspect that a 6-pound crate would be still more salable. But in some markets, the amount of honey sold to families direct by the crate, is scarcely worth considering, and so the markets may differ.

I first shipped honey in 30-pound crates, double-tier, and I believe that I never used anything larger. Then I came down to the double-tier 24-pound crate, and I thought it an improvement. Later still, I adopted the 12-pound crate, and was surprised to find that my commission man was not enthusiastic at the change. He said that the retail grocer, in many cases, was inclined to buy a little at a time, and, when out of honey, he would buy but a single crate. If the crates held only 12 pounds, instead of 24, it was double the trouble to keep such a customer supplied throughout the season, and, moreover, he would hardly sell as much honey, because oftener allowing himself to get out of stock. He said, "It's just as easy to sell 24 pounds to a grocer as 12."

While I think of it, I will mention an incident that Mr. Muth might have used to help his cause: I once shipped him a lot of honey in double-tier crates. In transferring from one car to another the railroad hands placed the crates in the car *glass side down!* Possibly they thought that when so placed, there would be no danger of any one stepping on the glass and breaking it. The condition of the honey may be imagined. It was no little to Mr. Muth's credit that he saved me from heavy loss by it. But if the honey had been in single-tier crates, their shape would probably have saved them from such blundering placing.

"A heavy crate is invariably set down heavy." Yes, but does Mr. Muth not know that railroad hands do not handle 12-pound crates singly? That has been the general rule when I have seen them handling honey, and if two 12-pound crates are taken at a time, will they not be set down just as heavily as one 24-pound crate? The lighter the crates, the better for handling, so long as they are not so light that two will be taken at a time.

Mr. Muth says: "By far the most practical, the safest in transit, the most salable, and the cheapest of all shipping-crates, are those containing 12 one-pound sections."

Why "safest in transit?" Because if one section is placed on another, its weight endangers the section below. Well, but I do not have one section resting on another, although I use double-tier, 24-pound crates—each tier contains 12 sections, two wooden partitions of ¼-inch stuff dividing the lower tier into three apartments, and on these two partitions rests a middle or false bottom of ¼-inch stuff to support the upper tier, which is again divided into three parts. Thus I have practically four sections in a box, making my crates just as safe in transit as the 12-pound crates.

But why "cheapest?" I have never known two 12-pound crates to be bought for as little money as a 24-pound crate.

As to "the most salable," I have already spoken. It depends somewhat upon the market, and I may mention one particular in which the double-tier crates have the advantage in any market. Suppose the double-tier to have—as I think they should have—two pieces of glass of just the same size as those used in the single-tier crates, there being a middle bar between the two pieces of glass. Now pile up side by side a pile of 12-pound single-tier crates, and a pile of double-tier 24-pound crates, and the 12-pound crates will have from 30 to 40 per cent, more wood in sight than the other. The more glass, the more honey in sight, and the more salable. Twelve-pound crates may be best for Cincinnati, but I think not for all markets.

Marengo, Ills.

WINTERING BEES.

Little Known About the Causes of Loss in Winter.

Written for the American Bee Journal

BY A. C. TYRREL.

After many years of experiment and observation, I have come to the conclusion (though somewhat reluctantly, it must be confessed) that as yet we know little or nothing about the causes that so often deplete entire colonies of bees, those suffering the most, nine times in ten, in my apiary, being those going into winter quarters with the largest amount of stores, largest number of bees, and, apparently, in the most healthy condition.

Many causes have been advanced to account for severe winter losses, among others being the pollen and honey-dew theories. Last season in this locality, honey-dew was plentiful—in fact, nearly all the box-elder trees fairly glistened with a thick sweet substance for a long time, the bees literally covering the trees while it lasted, but strange (?) to say, my bees never wintered better. Every colony at this writing is alive, and has remained in a passive condition since Nov. 17. It is impossible to find two quarts of dead bees in 32 colonies.

The weather has been changeable at times, many days the thermometer indicating 60° below zero; at other times, as many degrees above.

In preparing the bees for winter, last fall, I did not deviate to any extent from former plans, simply placing two or three thicknesses of burlap over the brood-frames, and shutting in the bees by tacking wire-cloth over the entrances to the hives.

THE CAUSE, OR SOURCE, OF HONEY-DEW.

Heretofore there has been a difference of opinion respecting honey-dew, some maintaining that it falls from the heavens; others say that it is excrement from insects. My observations last year confirm the latter theory, for those trees covered with slugs or lice, and those only, produced the so-called honey-dew.

My wife has a large running-vine in the house, that, at one time, became thickly covered with plant-lice. Wherever they gathered in large numbers, a thick, sweet substance appeared, which could not have dropped from the clouds, and it is not honey-dew, either.

Madison, Neb., April 1, 1890.

HIVES.

The Small Hives vs. Large Hives --Which?

Written for the American Bee Journal

BY A. J. FISHER.

On page 215, Mr. G. M. Doolittle calls attention to this subject, which I think is of considerable importance to the larger mass of bee-keepers. After thirty years' experience as a bee-keeper, I cannot endorse all he says in regard to this matter. In reference to the large hives not economizing heat as well as the small ones, my experience has been directly to the contrary, in this way: that is, I claim, and have proven repeatedly, that colonies in the large hives will come through the winter much stronger in bees and honey, consequently they are enabled to economize heat in the same proportion as the small ones.

I have had hives containing 3,500 to to 4,000 cubic inches, that did actually fill up with bees, and would swarm as soon (and often the first to swarm) as those in hives of 1,728 to 2,000 cubic inches, side by side; and what nice, large swarms these large colonies would cast! Then we do not have to be continually watching these large hives, and feeding the bees to keep them from starving to death, as we have to do with the small ones.

I wish to be understood right here, that I do not vindicate the above to be the correct size—I only relate it to show what has occurred in my experience. I believe it is universally admitted that the swarming propensity can be more easily controlled in the larger hives than in the small ones; and many of us are in great trouble about the swarming fever—especially Dr. Miller.

Again, in reference to those bees that Mr. D. speaks of hatching in the large hives at nearly the close of the harvest, being only consumers, and no profit to the bee-keeper—surely, are not these very bees the ones that help to lay the foundation for the successful wintering of that colony, thereby preparing it for the next harvest?

In regard to this contraction business, putting the queen off into a small pen, where she cannot breed to her full capacity—I am considerably in doubt about the whole business, and whether it will ever pay the large majority of bee-keepers. This contracting the queen into such small space that she cannot exercise her power in full, I look upon with the same consistency as applying the power of a ten-horse power steam-engine upon the work that could be accomplished with a two-horse power. I have yet to see the hive that ever had too many bees, the production of one queen, for profit.

I will venture to predict that these small hives, with their contracting machinery, such as are used by specialists, will never be generally used by the large masses of bee-keepers. I claim that a hive should be large enough so that the queen may have room enough to develop her powers in full, at all seasons of the year, with the additional room for the storage of pollen, and an abundance of honey, without feeding, to last from the close of one harvest to the beginning of the next; with bees in such a hive, which will have early-gathered honey, that will be well ripened and sealed long before winter, I believe we would not hear of the wholesale losses in wintering that we now hear of.

I will here ask what this size shall be. Quinby says 2,000 cubic inches; Langstroth says not less than 2,150 cubic inches; Chas. Dadant and J. M. Hambaugh say still larger than either of the above, and I believe them to be good authority. I am well aware that Mr. Doolittle has good authority also on his side of the question, nevertheless I do not feel that the question is yet fully settled in favor of the small hive. I consider this an important subject. The small-hive men appear to be pretty numerous, and have spoken their pieces well. I would now ask the large-hive men to come forward and speak their piece. It is a subject that needs intelligent and practical discussion.

Any hive that is not large enough to furnish the queen room enough to breed to her full capacity, with additional room for the storage of an abundance of honey to last the year through, without resorting to the sugar-barrel, I believe will never be generally used by the larger number of bee-keepers. In my experience, these large hives will stand the "ups and downs" of bee-life much better than the small ones. I am well aware that specialists can use a different hive than those who are not; but we cannot all be specialists. I would like to hear from others.

East Liverpool, Ohio.

TRANSFERRING.

How to Transfer Bees from Box-Hives to Modern Ones.

Written for the American Bee Journal

BY JULIUS J. PETTY.

Query 694, on page 197, asks advice on transferring bees from box-hives and re-queening the colonies at the time of taansferring the bees. I have transferred a great many colonies of bees from the box-hives, and I will give my plan of transferring.

The time of transferring is in May, during apple-bloom, here in Kentucky.

I have all the tools convenient for work, consisting of a bee-smoker (Bingham's), hatchet, saw, table, knife (or honey-knife), cold-chisel, a box to place over the hive for the bees to go into, and the new hive.

I then give the bees a few puffs of smoke at the entrance (to make them fill themselves with honey), and wait a few minutes. Returning to the hive, and giving the bees a few more puffs of smoke, I then invert the hive, place a box over it, just the size of the hive, and commence drumming on the outside of the hive, to drive the bees up into the box.

Remove the old hive, and put the box on the old stand, so that the outsiders can go in. I then lift the hive to the table, taking the hatchet and cold-chisel to cut the nails so as to take off one side. I proceed to cut the combs out of the hive, and lay them on the table (on a piece of cloth); place the frames over the combs, and cut around the frame just the size of the frame, and let the frame go down over the combs. Now use the transferring clamps, or wrapping-twine, to fasten them in the frames, hang the frames (as you tie them) in the hive, using all the combs with brood in them.

If I have any pieces of comb with brood left, lay them on top of the frame, and let the brood hatch out, (or use the Heddon plan.) Where there is any crooked combs, cut a **V**-groove along the combs, and then press down on the combs to straighten them. Place them in the frames, and after the bees have worked over the combs, the bee-keeper cannot tell that they were ever crooked. Use all of the combs in the hive.

In about ten days the hives should be examined, and if the combs are all glued to the frames, remove all the strings or clamps from the combs.

I would not advise re-queening a colony of bees at the time of transferring. My way of doing this work, is to wait about three weeks, and then give the bees a new queen.

Independence, Ky.

FRAME-COVERS.

Simple Covers Made for Brood-Chambers of Hives.

Written for the American Bee Journal

BY RANDOLPH GRADEN.

I have often seen items in the AMERICAN BEE JOURNAL and other bee-papers, describing covers for the brood-chamber, some using enameled-cloth, and others plain boards, etc. As yet I have never seen the cover described that I have used of late, still if I had applied for a patent and made any mention of it in the BEE JOURNAL, I doubtless would have heard that it had been in use for years! Still, I really believe that it is, or has been, in use, for it would seem very strange that so simple a thing had never been tried, or in use.

I notice that many use Hill's device for putting on the frames in the winter. If those same parties would use the cover that I am about to describe, they would need no other device for laying upon the frames, to make a passage for the bees; neither would those that use a board (that is, if the board is properly made), but there is an objection to the use of a plain board alone, for when you want to examine a colony, and it happens to be a little cool, the board comes off with a snap, that arouses the whole colony. As to the enameled cloth, its most serious objection is the accumulation of moisture. The cover which I have used of late, and which I like very much, is made as follows:

Take any thin board (I use soft, porous lumber for mine), and cut it one inch smaller—that is, shorter and narrower than the brood-chamber, and make a hole in the centre, which is used for different purposes—I use it in feeding, etc., but it can be used for the bee-escape.

Then take two T tins (I use strips of zinc, as that is stronger) and bend them L shaped, the short side of the L to be just scant bee-space. Then I have the L a little longer than the board is wide, and lay the L shaped strip upon the board, so that the longer side of the L is on the board flat, having it so that it projects a $\frac{1}{4}$ or $\frac{1}{2}$ inch on each side of the board; then cut the zinc, that is, the side that lays flat to the corner of the L, and lap it around and against the other side, so as to make the zinc stronger, and the same length of the board in width.

Tack the zinc to the underside of the board, so that the zinc L sets upon the brood-frames where there is the most strength in the frames, so that there is a bee-space between the board and the brood-frames, for a passage for the bees. The T tins will answer the same purpose as the zinc strips.

Now put a strip of enameled cloth all around the cover or board, so that it will just cover the brood-chamber the same as the ordinary emameled-cloth covers, and it is complete. You will see that you can lay the lap back to peep into the hive, just the same as with the enameled-cloth cover, and if you twist it back and forth a little, it can be taken off as carefully as the cloth cover. As the bees cannot stick it fast to the tin or zinc, it will easily loosen from the propolis; and if the strips of cloth are properly tacked on, and the ends of the board cleated so that it cannot warp, it makes a good, strong cover for summer or winter.

Taylor Centre, Mich.

IOWA.

Report of the Eastern Iowa Bee-Keepers' Convention.

Written for the American Bee Journal

BY FRANK COVERDALE.

On March 18, 1890, at DeWitt, Iowa, was gathered a number of bee-keepers of this (Clinton) and adjoining counties. The meeting was called to order by J. M. Jacobs, who briefly stated the object of the meeting to be the organization of a bee-convention. The following officers were elected for what was named "The Eastern Iowa Bee-Keepers' Association:" President, Wm. Kimble; Vice-President, J. M. Jacobs; Treasurer, L. J. Pearce—all being of DeWitt; and Secretary, Frank Coverdale, of Welton.

The Constitution and By-Laws of the Progressive Bee-Keepers' Association of Western Illinois were read and adopted, with the amendment that the officers always be elected by ballot.

The afternoon session was called to order by President Kimble, and the enrollment of members read. The business of the meeting was then entered upon, and the first question discussed, was

HOW TO PREVENT INCREASE.

President Kimble said that after-swarms could be prevented by cutting out, on the seventh or eighth day, all queen-cells but one.

H. D. Harrington, of Calamus, stated that bees would seldom swarm if given plenty of room at the right time. He tiers the cases from one to five high, and has about one swarm from 20 colonies, when working for comb honey.

D. D. Hammond, of Malone, thought that swarming could not be prevented when working for comb honey, but he prevented it all that he could by giving plenty of room.

H. D. Harrington said that the man and the bee-hive must go together.

David Wagoner, of Calamus, extracted the honey to prevent swarming.

A. C. Bentley, of Maquoketa, thought that the free use of the extractor would do much toward preventing swarming.

"How shall we manage the swarms when so many issue at once?" was asked.

President Kimble keeps tubs of water in the yard, and when the bees show an indication of swarming, he sprinkles them so as not to have too many issue at once.

Ex-Senator L. W. Stewart, of Monmouth, stated that he had experienced but little difficulty while his bees were swarming. He keeps the queens' wings clipped.

A. M. Tinker, of DeWitt, inquired what to do with colonies when they did not do good work. The majority of those present deemed it necessary to give them a new queen.

J. O. Ferree, of DeWitt, proposed for discussion,

THE WINTERING OF BEES.

E. W. Coe, of Clarence, keeps, a small quantity of unslacked lime in his bee-cellar during the winter, for the purpose of absorbing the moisture; also raises the hives from the bottom-board, giving plenty of bottom ventilation.

A. C. Bentley keeps his bees in a well ventilated cellar made specially for their use, and gives a little ventilation to his hives. His bees winter successfully.

D. D. Hammond also winters his bees in a dry cellar, giving the hives a good pitch forward.

Mr. Stewart removes the tops of the hives, and covers with old carpets, and mats made of cotton-cloth containing $1\frac{1}{2}$ rolls of batting for each hive. He lost no bees. He made a special point of not taking the bees out of the cellar too early—say about the middle of April, or even later.

David Wagoner winters his bees in a cellar; removes the hive-cover, and puts a cloth over the top of the hives. The bees winter successfully.

L. J. Pearce gives top ventilation to prevent moldy combs.

President Kimble thinks that a bee-house is preferable to a cellar, for wintering bees. He raises his hives from the bottom-boards, and gives plenty of ventilation. He thinks that the top should be kept tight.

H. L. Harrington said that bees will winter all right if subject to proper ventilation.

Mr. Jacobs believes in ventilation for bees, but would avoid a draft.

The next question discussed was that of

FEEDING BEES.

Mr. Hammond was asked to give his views, and in answer he said that he would never feed bees unless it was absolutely necessary, as too much feeding stimulates an overplus of breeding, when not desired. If feed must be given, use full combs of sealed honey.

FOUL BROOD.

Mr. Jacobs inquired if any member present knew of the existence of any foul brood in this vicinity. Mr. Coe did not think that the disease was in Iowa; he had seen it in California.

President Kimble stated that the disease had been prevalent years ago in adjoining counties.

CRATES FOR SHIPPING HONEY.

"Which are the best crates for shipping comb honey?"

Mr. Coe favored the single-tier, 24 sections in a crate, with glass sides. He would not advocate re-packing, as it does not ship as well, and he receives no better prices.

C. Kuebler re-packs and ships in the Lewis crates.

It was quite unanimously thought that shipping-crates holding only one tier is best.

"Which is the most profitable race of bees to keep?" For all practical purposes, the Italian bees were considered first on the list.

At the evening session, after prayer by Rev. F. J. Norton, and some pleasing music, Hon. L. W. Stewart, of Monmouth, gave a rapid but most interesting sketch of bee-culture. From the earliest history, the bee had been the companion of man; honey in Sacred Writ was often referred to as an article of food and of commerce; this industry, like all others, has its ups and downs, but it is now, through the investigation of Huber, and the improved hives of the present day, rapidly coming to the front as one of the principal industries.

"Do bees injure fruit?" was the subject of an interesting essay read by Mr. A. M. Tinker, in which he contended that by distributing the pollen, it actually increased the fruit product.

The average yield of each colony, spring count, for last year, was 112 pounds—about half extracted.

Welton, Iowa.

INCREASE.

How to Manage It when Working for Extracted Honey.

Written for the American Bee Journal

BY AARON BENEDICT.

Mr. H. W. Funk's prize essay on page 198, is excellent, all but the ventilation of the colony. I put the extra hive under, instead of on top, of the old hive. If the old colony swarms, I hive them, place them on the old stand, put the old hive on top with a screen honey-board between. After they get fairly to work in the new hive, remove the screen honey-board, and let the bees together again. Remove all the queen-cells from the old hive.

If there is a case of sections on the old hive partly filled, leave it until finished. By the time the queen gets the lower hive filled with eggs, the young bees will all be hatched; and if the honey-flow be good, the bees will have filled it with honey. This can be extracted before the fall harvest comes.

DIVIDING COLONIES FOR INCREASE.

This is done the same as above, by moving the old hive, and putting a new one in its place. Now open the old hive, take out the comb that the queen is on, place this in the new hive, put a frame of comb in its place, put on a screen honey-board, and place the parent hive on top. In eight or nine days cut out all queen-cells in the old hive, take away the division-board, let the bees together, and the job is done. This is the best plan for out apiaries to secure extracted honey with the least trouble.

After the honey harvest is over, place the bees back in the hive, giving them plenty of good, sealed honey. All the rest can be extracted. If the bees swarm again, hive them, and place them under the other two, as in the first place. This keeps the working-force together. If the empty hive is placed on top of the parent hive, the bees may, or they may not, work in the upper hive.

If the queen is left in the parent hive, and is cramped for room to deposit eggs, the bees will be almost sure to swarm out. By placing the queen in the empty hive, she has ample room to deposit her eggs for producing workers to gather the honey, and, if the honey-flow is abundant, the bees will fill the parent hive full of honey. This can be extracted at intervals, or all at once. Try my plan, and see if it is not better than Mr. Funk's method.

Bennington, Ohio.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Getting Bees Out of the Cases.

I use two methods for getting bees out of cases filled with honey, viz: 1. In warm weather I slip a board under the case to be taken off, and leave it there for three or four hours (but not longer), after which I lift the cover off quickly, raise one end of the case, and blow a few puffs of smoke under—then you should see my bees escape. 2. Later in the season, when the nights are cool, I use a cloth (burlap) instead of a board, with one corner turned back, so as to leave a small hole for the bees to get down through. I do this in the evening; the next morning before the sun is up, I can carry the cases into the honey-house with scarcely a bee, and no robbing started. I have taken several tons of honey off, by the above methods, and know that they work all right. I have neither boards nor cloth to sell, and do not use any funnel in my bee-escape. Everebody is welcome to use the plans. JOHN HANDEL.

Savanna, Ills.

Apicultural Prospect in Florida.

The greater portion of Florida has been suffering from a six-months' drouth. I do not think that an inch of rain has fallen in all that time. Capillary action is very active in our sandy soils, and brings up water from below to supply, in a great measure, the wants of vegetation, but on the surface there has been much dried grass and other material, and the forest fires have licked up hundreds of acres of this, and, in doing so, destroyed much of the early bee-pasturage.

As another result of the dry spell, we have been visited by one of the most distructive "freezes," lasting but a few hours, that the State has ever known, and that lessened still more our chances for an early honey crop, by cutting off the bloom growth of the orange and other trees that were about coming into flower. The orange trees are putting on new buds, and will probably bloom to some extent later on, but I do not look for much honey from blossoms out of season. The mangrove—our main stay—seems to be all right, and we hope to have a heavy flow from it, in which case those whose bees are in good condition, will get a good, paying crop of our finest grade of honey.

My own bees are in fair condition, and well supplied with honey in their hives, as a rule: but, as is my custom in April, I am feeding a little to keep them breeding, so as to be ready for the honey-flow that commences in May and lasts until August. Having many dropped oranges on the ground in my groves, I have split some of them for my bees, and they gather thickly upon them, and suck up the rich juices until nothing but a dry shell remained. I believe there is profit in doing this late in the season, where circumstances will allow of it. I do not look for a large honey record here this season, but I believe we have reason to hope for a fair crop.

W. S. Hart.

Hawk's Park, Fla., April 4, 1890.

Wintered Poorly—Diphtheria.

I have 20 colonies of bees left, out of 77 colonies put into the cellar last fall. I took out a few on March 1, and they are all right—all had plenty of honey. My family have all had the diphtheria; for four weeks I had but three nights of sleep. We are all over it now.

Fayette Lee.

Cokato, Minn., April 7, 1890.

Hard Winter on the Bees.

The winter is over, which was a hard one on my bees. They seem to have gone the same as Mr. Ellingwood's bees (see page 220). My Italians do not seem to stand the winter the same as the hybrids and blacks. I lost 6 colonies of Italians, and only one of the hybrids; I have only 8 colonies left, 4 being Italians. They are working hard, and getting pollen from willow and other trees.

John Boerstler.

Vashon, Wash., April 1, 1890.

Use of Drone and Queen Traps.

On page 236, Mr. D. B. Cassady asks the following question, which is referred to me for reply: "If the drone and queen-trap is used on hives to catch the queen, will it not hinder the workers from carrying in pollen, as the perforations seem too small to admit of the bees getting the loads of pollen through?"

In answer to the above inquiry, I will say that the bees are not in the least hindered in their work by placing a queen-trap at the entrance of the hive. If a trap is placed at the hive-entrance of a large colony of bees, and a box arranged to catch the pollen which happens to be rubbed off when the bees pass through the metal, it will be seen that there is no more than would be found at the entrance of a hive where there is no trap.

An expert bee-keeper once visited my apiary, and the trap was talked about. Said our friend, "I don't like the trap, as it brushes so much of the pollen off the legs of the bees, when they pass through the metal." I replied that he was mistaken, and that the trap did not work as he supposed. We at once went into the apiary and made an examination, as there were several traps in use there. We first examined a large colony which were working through a trap; the trap had been on the hive for several weeks; and after a close inspection about the hive and in the grass under the alighting-board, I believe three pellets of pollen were found, and this was after the bees had been at work several hours carrying in pollen. So much for that. Now let us go a little further.

A good deal has been said in years past about too much pollen in the brood-nest. How would it do to use still smaller perforations in the metal, and try to keep out a large part of the pollen? I will say, however, that I never saw a colony that had too much pollen. I have seen, on many occasions, cases where brood-rearing was retarded in the early spring on account of the scarcity of pollen.

No, the bees are not in the least disturbed when a trap is placed at the entrance of their hive. The perforations are not too small for the worker-bees to pass trough—a thing which you can discover in a short time after a trap is placed on the hive. There are now nearly 100,000 traps in use, and no one has ever complained that the bees have trouble in passing the metal. Test it for yourself.

Henry Alley.

Wenham, Mass.

Wintering in a Bee-House, etc.

I am drifting into the bee-business. I commenced with one colony, and now I have 17. They are now in the bee-house, and are doing finely. I find it a pleasant and profitable business; my spare time can be occupied in my favorite pursuit—inventing and experimenting. Finding it necessary last summer to have a device for fastening foundation in one-pound sections, I got up one which I think is better than any other that I have seen.

John Lucas.

Small Loss in Wintering.

Bees have been bringing in pollen lively to-day, and I am surprised to find mine in so fine a condition. I considered the stores poor last fall, and expected a loss of 25 per cent., but it will hardly reach 5 per cent., if we have reasonable weather from this on. Every winter strengthens my opinion that double-walled hives are the best adapted to this climate. My colonies are very strong and uniform.

Geo. E. Hilton.

Fremont, Mich., April 8, 1890.

Colonies Strong in Bees.

My bees all came through the winter in good condition. They are gathering pollen, and have been for several days. I never saw them so strong in the spring, in my thirty years of bee-keeping. Everything looks fair for a good crop this season, but I fear we will have too much rain. Our last three seasons have been too dry, and we have had poor honey crops, but still the bees have paid their way.

W. H. Graves.

New Carlisle, Ind., April 9, 1890.

Standard Implements.

1. Should a hive, frame, section, or any apiarian implement be adopted as *the standard?*

2. If we do, would it not be a waste of time, money, patience, energy and genius, on the part of the inventor, to give more rigid scrutiny to our industry?

3. Would it be the proper proclamation to the world, that we have arrived at the summit of our art, and that we had no further use for the inventor, bee-papers, or conventions?

4. Would it not be better to go on in a go-as-you-please plan, and try to keep up with the procession?

J. W. Tefft.

Collamer, N. Y.

[Until that which *is perfect* has come, it would not do to impede progress by adopting a "standard." Invention and improvement go hand in hand—but inventions are not all improvements, by any means.—Ed.]

Bees Wintered Nicely.

I started last spring with 10 colonies, and increased them to 30, all of which I will have to commence with this season. They have all wintered nicely, so far. This is a queer year—when we ought to have our spring, we are getting our winter. Last year was the poorest that I ever saw since keeping bees; from 30 colonies I got 600 pounds of honey.

J. H. Scherer.

Lena, Ills., March 30, 1890.

HONEY AND BEESWAX MARKET.

BOSTON, April 9.—We quote: Fancy 1-lbs., 16@17c.—very little in the market. Two-lbs., 15c. Extracted, 8@9c. No Beeswax on hand.

BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and ½ barrels, 7½@8c.; in tin and kegs, 7@8½c.: dark, in barrels and ½ barrels, 6@6½c. Beeswax, 23@26c.

A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 7.—Supply of white 1-lbs. is very limited—10,000 or 20,000 lbs. more of fancy comb in 1-lb. sections would find a market here before the new crop comes. Extracted sells very slowly. We quote: Fancy 1-lbs., white, 13c.; choice 1-lbs., 12c. Fall amber 1-lbs. and 2-lbs., 9@10c. Choice white 2-lbs., 11@12c. Extracted, white, 7c.; amber, 5@6c. No Beeswax in the market,

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demadn good.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
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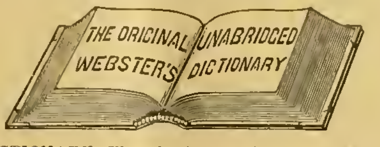
☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

WONDERFUL

Nearly every one is familiar with the name, but it has been estimated that only one in every 280 persons in the United States is fortunate enough to have access to the valuable information contained within the covers of the grandest work ever written by mortal man—WEBSTER'S UNABRIDGED DICTIONARY. That this is an unfortunate state of affairs will be admitted by all, and it is due to the fact that no one save the rich could afford them.



The Dictionary is a necessity in every home, school and business-house. It fills a vacancy and furnishes knowledge which no 100 volumes of the choicest books could supply, and all, young or old, educated or ignorant, rich or poor, should have it within reach, and refer to its contents every day in the year.

The "Loomis Re-print" contains all the matter as compiled and arranged by our esteemed and honored author and statesman—Noah Webster. About 40 years of his life was devoted to this great work; and when we consider the fact that this book contains about 100,000 words with their correct spelling, derivation and definition, we will appreciate that these years must have been well spent.

Some idea of the magnitude of this book may be gained from the fact that it contains over 440 cubic inches of paper, and has about 300,000 square inches of printed surface. This is a cheap, re-print edition without illustrations.

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For this valuable Dictionary is as follows: We will club it with this Journal one year—both for $2.75. Or, we will sell the Dictionary alone for $2.00. Or, we will PRESENT it to anyone who gets up a club of 8 NEW subscribers to either or both of our Journals, and sending us $8.00 to pay for them.

These prices are for the Dictionary delivered at the Express Office in this City, or packed with other goods.

We will send it, post-paid, to the destination for 68 cents additional.

This immense book, wrapped for mailing, weighs 8½ pounds.

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The Time for Spring Work will soon be here, and those who need a guide for all the operations in the apiary, should procure a copy of Dr. Miller's book entitled "A Year Among the Bees." Its descriptions commence with the necessary work in the spring, and run through the entire year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. We have only a limited number of copies left, and those who want it should send for it at once. We will hereafter mail it, bound in cloth, to any address for **50** cts., until all are gone.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, just issued by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

☞ Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

☞ We have sent Queens this season, to Nebraska, Washington, Michigan, and other Northern States, and have not lost a single Queen! We always *guarantee safe delivery.*—Colwick & Colwick, Norse, Texas.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

Advertisements.

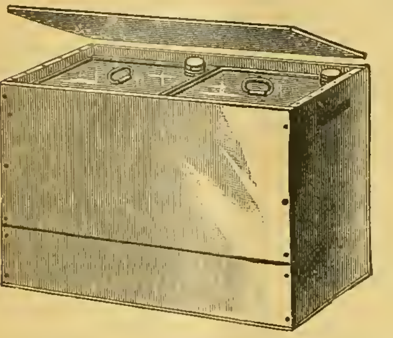
Choice Italian Queens —**TESTED**, $1.50; UNTESTED, $1.00; Strong 3-Frame **Nucleus,** with Tested Queen, in May, $4.00—in June, $3.00.
MISSES S. & M. BARNES, Piketon, Ohio.
16Atf
Mention the American Bee Journal.

FOR SALE! FOUR COLONIES OF **ITALIAN BEES** in Langstroth hives. Correspondence Solicited.
E. F. GATES, 5534 La Salle St., Chicago, Ills.
16A1t
Mention the American Bee Journal.

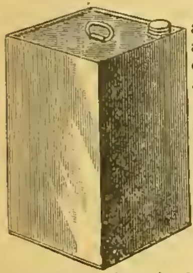
40 **TESTED ITALIAN QUEENS** now ready at $1.00 each. Bees by pound, 75c; also Nuclei and Untested Queens. See American Bee Journal since March 15th.
16Atf LUTHER W. GRAY, ORLANDO, FLA.
Mention the American Bee Journal.

Choicest Italian QUEENS! **Purely** BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**
15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1	Single Can ....(boxed).........	$ .45
12	" Cans ... "	5.00
100	" " ... "	40.00
1	box of two Cans................	.75
12	boxes "	8.40
100	" "	65.00

THOMAS G. NEWMAN & SON,
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Biggest Bargain--1890 !

34 New Heddon Hives—NEW: 2 wide-frame Invertible Surplus Crates to each Hive—all painted two coates white lead; regular price, $4.00 each, $136.00. One 4-basket Stanley Honey-Extractor, $20.00. One Lamp Nursery, $4. One extra large, new Smoker, $1.50. One Gray Foundation Machine, 75 cts. Two Bee-Veils, $1.00—all F.O.B. here NOW. Also in August, one dozen Tested Italian Queens, $12. Total, $175.25. First draft for $100 takes the lot. REFERENCE: Thos. G. Newman; James Heddon; W. Z. Hutchinson. Purchaser furnished with Heddon's individual right to make and use Heddon Patent Hives.

16A1t E. D. KEENEY, ARCADE, N. Y.

Mention the American Bee Journal.

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Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, CHICAGO, ILLS.

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Carniolan Bees!

Pleasantest Bees in the World.
Hardiest to Winter.
Best Honey-Gatherers.

In order to introduce not only the bees but our paper,

"THE ADVANCE,"

We offer to any one who will send us $1.25, a copy of our paper and a nice Carniolan Queen. The Queen alone is worth $2.00. Address,

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A 50-cent monthly that gives the cream of apicultural literature; points out errors and fallacious ideas; and gives, each month, the views of leading bee-keepers upon some special topic. Three samples free. Send for them, and learn how to get the back numbers cheaply.

W. Z. HUTCHINSON, Flint, Mich.
10Etf

Mention the American Bee Journal.

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Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,

6Etf JNO. NEBEL & SON, High Hill, Mo.

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We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t

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My 22nd Annual Price-List of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. H. H. BROWN,
14E4t 23C2t Light Street, Columbia Co. Pa.

Mention the American Bee Journal.

CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

Mention the American Bee Journal.

1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.

14Etf J. T. WILSON, Little Hickman, Ky.

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WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship. **Italian Queens and Bees** at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

A. F. STAUFFER & CO.,
40Etf STERLING, Whiteside Co., ILL.

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WHERE DO YOU LIVE?

IF YOU will let me know I will send you my Circular for 1890 which will tell you all about the Hive we are selling for 55c; and if you want 25, can let you have them for 49c. Also 100 Brood-Frames for $1.00.

WM. H. BRIGHT,
15A4t MAZEPPA, MINN.

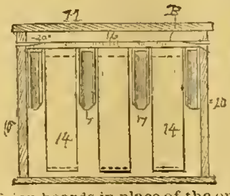
Mention the American Bee Journal.

POOR MAN'S LANGSTROTH HIVE

Before buying Hives, send for our Price-List on this Hive as described on page 186 of this Journal. It is the BEST and CHEAPEST Hive made.

SMITH & SMITH,
14Atf Kenton, Hardin Co., Ohio.

$1.50 Double Walled Hive.



I MAKE my improved Spacer with the downward-extending arms nearly as long as the end bars of the frames; and with suitable division-boards in place of the outside combs; a hive is converted into a double-walled hive, with the spaces at the ends of the frames closed, which is a great aid to a weak colony in building up in the spring, if the hive is well-packed on top of the frames. Price of Brood-Chamber and 8 Frames, $1.50; one Hive and one doz. extra Spacers, $4.00. Spacers, long or short arm, $20.00 per 100. These prices are for Frames ⅞-inch wide. When ordering give the width of your hive inside. J. B. WILCOX, Manistee, Mich.
15Atf

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A NEW DISCOVERY!

THE COMMON-SENSE HONEY EXTRACTOR is strictly scientific, powerful, durable, handy, clean and rapid, and differs from all others, and is cheaper than the cheapest at slaughter prices. CIRCULARS FREE.

REV. A. R. SEAMAN,
NEW CUMBERLAND, Hancock Co., W. VA.
16E2t

Mention the American Bee Journal.

LOST The old prices on Bee-Hives, and new ones found. Send for Circular—FREE.
14Etf **L. J. TRIPP, Kalamazoo, Mich.**

Mention the American Bee Journal.

H. G. FRAME, North Manchester, Ind., breeder of **Italian and Carniolan Queens.** Bees by the pound and Nucleus. Price-List FREE. Reference—First National Bank. 10Etf

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The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25 ☞ *Mention this paper.* A. I. ROOT, Medina,

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FOR SALE! **Italian Bees and Queens,** in small and large lots, at a VERY LOW PRICE. Address, OTTO KLEINOW, No. 150 Military Ave., Detroit, Mich. 12Atf

READY TO SHIP! Italian Queens—Tested, $2.00; Untested, $1.00—3 for $2.75. Ready April 1st. Nuclei cheap. Send for Price-List. COLWICK & COLWICK, Norse, Bosque Co., Texas. 12A6t

Mention the American Bee Journal.

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. April 26, 1890. No. 17.

The Bees are daily winging
Their way to distant fields,
And from the sweet bloom bringing
The treasures which it yields.

Oh, that we all were learning,
If we the "prize" would win,
To *daily* toil be turning,
And constant work begin.
—Anna Miltona.

☞ Prof. A. J. Cook sustained quite a loss by fire on his farm in February.

The Unusual amount of warm weather during the winter months has kept the temperature in winter repositories so high that the aid of ice has been necessary quite frequently to cool the place.

A Liberal Premium List is presented for the Bee-Department of the Minnesota State Fair. The Secretary, Col. W. M. Liggett, of Hamline, Minn., will furnish Premium List and information on application.

☞ The *Apiculturist* for April is on our desk. It is, as usual, filled with spicy reading for bee-keepers. The *Apiculturist* is fully up with the times, and it is a pleasure to read every copy as it comes to hand. It richly deserves its success.

A Fire destroyed the factory of G. B. Lewis & Co., at Watertown, Wis., on Saturday, April 19. The origin of the fire is unknown. Loss, $15,000, with an insurance of $4,500. This is a heavy blow for the enterprising firm, for their stock of hives and sections were all destroyed; but their well-known enterprise and *vim* will soon find new quarters and adequate machinery to resume business in the shortest possible time.

The Canadian Tariff Revision is being made, and the *Canadian Bee Journal* justly complains of its "honey" item. It says:

> In the revised tariff just submitted to the Dominion Parliament by the Minister of Finance, the following paragraph appears:
>
> "76. Honey and imitations thereof in the comb or otherwise, three cents per pound."
>
> It seems to us that if we allow this to become embodied into the tariff, permanently, that we will be tacitly admitting that there is such a thing as "imitation" honey. This is especially bad in the case of "comb honey," because no such thing as "imitation" comb honey has ever been made or offered for sale. We are forced to admit there are adulterations of honey in its extracted form, but the wording of the paragraph can be changed to suit the case much better, as follows: "Honey in the comb, or extracted and adulterations thereof."

It is all-important to watch the actions of those who know nothing of honey-production. They are so liable to make mistakes, which are full of danger to the pursuit—especially when they presume to legislate about it. Keep them to the mark, and thus compel them to do justice to honey-producers.

The Work of the Cyclone in the apiary of E. Drane, of Eminence, Ky., was graphically set before our readers in a letter on page 253. Mr. Drane gives further particulars in a letter dated on April 14, 1890. He says:

> It was thirteen buildings destroyed, not three. The brick smoke-house only had the roof, gable, and part of one wall blown off. The poultry-house escaped with half the roof off and several holes shot by flying timbers from shop and honey-house. There were nearly four miles of fences wrecked. I believe there are 100 wagon loads of kindling wood, less than two feet long, on our farm. Thousands of people who have seen the wreck, say that they never saw anything to equal it. E. Drane.

Mr. Draue has sent us a photograph of the apiary, taken since the cyclone's visit to it, which shows the terrible work done by it. Large trees were torn to pieces, and others taken up by the roots. Buildings, hives, and everything in the apiary were tossed about as if they were matches, and scattered promiscuously about. The photo is placed in our office Album.

Honey-Dew, so-called, for winter stores for bees has been tested by Mr. Ira Barber, of De Kalb Junction, N. Y., and he has made the following report, dated April 17, 1890:

> According to promise, I will give the condition of the bees, after living on "bug-juice" for five months, for quite a number of them had nothing to live on but that. All that had queens have wintered in fine condition. Four colonies out of the 140 were queenless, and failed to winter. Many of the hives are quite badly soiled on the outside, but no damage is done. The timber that the bugs and bees frequented in this locality, was swamp-elm. The temperature that the bees were wintered in, was from 46 to 56 degrees. Ira Barber.

Japan.—The Secretary of Agriculture has just been advised by the Secretary of the State, that by the courtesy of the Imperial Government of Japan at Washington, the Japanese Charge' d' Affaires, Mr. Aimaro Sato, has placed at the disposal of the American government, some invitations to the Agricultural and Industrial Exposition which has just opened at Tokio, and will be continued until July 31.

These invitations are extended through the Minister of Agriculture and Commerce of Japan, and entitle the recipients to special privileges in connection with the Exposition, and as regards traveling in all parts of the Empire. They would unquestionably serve as most valuable pass-ports to American visitors, seeking to acquaint themselves with the agricultural and industrial resources of Japan, and to extend American trade in that direction.

California Honey Crop.—In conversation with an experienced bee-keeper a few days ago, he said it was a fortunate thing that bees had stings; if it was not so everybody would be keeping bees, and they would be as plentiful as the common house-fly; and honey would be so plentiful that it would be sticking to everything; that the world would get tired of it and exterminate the bees to get rid of the honey. Perhaps there is some ground for our friend's remarks, but unless there is a change in our climatic conditions there will be no surplus of honey to grieve over in Southern California this year. Continued rains, cold nights, and an abundance of snow in the mountains in March, are not such surroundings as are calculated to make an abundant honey harvest.—*Exch.*

The Report of the New York State Bee-Keepers' Convention held last February, is printed in pamphlet form. A copy of it has just been received by mail. It contains 24 pages, and is a fair report of the meeting—though not a *full* one. A copy of it may be obtained of the Secretary, G. H. Knickerbocker, of Pine Plains, N. Y., for 10 cents.

This Association was founded by the late M. Quinby, in 1868.

☞ A new pamphlet is on our desk, entitled "Pratt's New System of Nuclei Management." It contains 10 pages, and is issued by E. L. Pratt, of Marlboro, Mass. He details his nuclei system of management, and experiments with Carniolan bees. He does not say so, but we presume it is intended as his Circular and Price List for 1890. All those interested should send for a copy.

An Early Swarm is reported at Palmyra, Ills., on the 7th inst., by Warren Smith. The bees clustered on a tree. He hived them and gave them a frame of honey, but they were robbed. Mr. E. H. Groh, of Dixon, Ills., reports that his bees were gathering pollen all day on April 13. Since, it has been quite cold in nothern Ills.

GLEAMS OF NEWS.

Trees for Shade and Honey.—The importance of planting trees for the nectar which some of them so profusely yield. as well as for their grateful shade and general attractiveness. should not escape the attention of all bee-keepers who desire to extend their fields of honey-producing blooms. Especially should this subject of tree-planting be thoughtfully considered by apiarists, when they have been so forcibly reminded that the unexcelled nectar-bearing tree—the precious linden or basswood—is fast disappearing under the woodman's ruthless axe.

Let every one interested in securing the largest measure of success from his own, and the efforts of his bees, see to it that, among others, the lindens are freely planted to grace the walks of home or town, and to supply their delicious sweetness for the "busy bee's" delight, and its keeper's profit.

The following paragraph, relating to this matter of growing trees by bee-keepers, are excerpted from the *Rural Californian:*

> Every bee-keeper is interested in forestry, whether he knows it or not. The presence of trees, whether large or small, protects the surface of the earth from the intense and scorching rays of the sun in summer, prevents the evaporation of moisture occasioned by rainfall, and also prevents the rapid absorption of moisture at the roots and rootlets of trees,obstructing the descent of water, and causing it to be held so that it percolates through the soil and rocks, storing it for use in streams, as well as for evaporation in the atmosphere.
>
> Much of the nectar gathered by the bees comes from the bloom of trees and shrubs. The oak, sycamore, locust, willow, blue-gum, acacia and manzanita are all good honey-producers; while the sages are the best of all. But other trees that produce no nectar-bearing bloom, are useful in tempering the atmosphere, creating that humidity that is essential to the secreting of nectar in flowers, whether growing trees or plants. Besides, trees are wind-breaks, sheltering from the sweeping blasts that come down from the north, lapping up the moisture in the earth when unmolested, and increasing in velocity as they drive over barren mountain sides, valley and plains.
>
> Then let the bee-keeper plant trees, being assured that he gathers wealth from each swaying branch, and every sturdy trunk and root of the trees that ornament and beautify our landscape.

It is Foolish to send circulars to a list of names that have been copied from old copies of Journals. Many of such have changed their addresses, and some are dead. We know of one who has been dead for several years, but the usual batch of circulars come through the mails every year, and are consigned to the waste-basket. The best way is to advertise in a *live* Journal which has the newest addresses regularly. Sending to old addresses is wasteful economy.

Good Queens in the Spring.—Mr. L. H. Wilcox, of Hastings, Minn., gives this excellent advice and caution in the *Farm, Stock and Home* for last week:

> In expanding the brood-nest to accommodate the increasing numbers of bees be careful to give no more room than will be occupied and kept warm by them, usually one or two combs at a time is all we can add with safety, and they should be placed in the center of the nest, with the filled combs of brood on each side, and honey outside of all.
>
> If we get the queen to laying well at an early date by providing the necessary warmth and stimulative feeding. we may expect by the middle of May to have from 1,500 to 2,000 bees hatching daily, and these will be of just the right age to secure the crop of white clover honey from this time on. If we are sure they have a good queen the brood-nest will require but little attention until it is time to take them in hand to prevent swarming, of which we will speak later on.
>
> During our spring examinations we always expect to find about one queen in four or five that from age, incapacity or other cause, fails to produce sufficient eggs for best results; these were sometimes exchanged with a weak colony that has a young and vigorous queen; but usually we simply mark the hive, and as soon as we can rear our first young queens ready to introduce, off comes the "old lady's" head.
>
> This is a matter generally neglected by our best bee-keepers, and always by the more negligent ones; yet it is so important that it often makes 25 per cent. difference in the yield of an apiary, and every man who keeps fine colonies can well afford to rear and keep on hand a few extra queens, while to the large apiarist it is indispensable to successful work.
>
> To illustrate this point: One of our most expert bee-keepers, Rev. Alex. Telford, told me that while his whole apiary of 38 colonies averaged 126 pounds of surplus each, 12 of them did not give anything, and he ascribed it to the condition of their queens.
>
> The danger period is during the month of April; our little workers have lain semi-dormant through the long winter, eating but little, often not more than four of five pounds per colony; but when they commence active brood-rearing, they require a large amount of food, and if the weather is unfavorable, as it was in the spring of 1889, will frequently starve to death before we realize their danger. So to the skillful care they receive at this time, we largely owe their subsequent prosperous condition.

Bee-Escapes.—Mrs. L. Harrison has this to say in the *Prairie Farmer* about bee-escapes and their use:

> These are "the latest fad," and are receiving much polite attention from the bee-keeping world. It appears to me as though "Barkis is willin'," and that honey-producers will accept them and put them into practical use in their apiaries.
>
> When honey is coming in, an empty case of sections is put on, then the "escape," and above it the finished sections containing the bees. If an empty case of sections is placed under the finished one without any "escape," many bees will remain there when it would be an advantage to have them working in the empty case.
>
> During a rush of work in the apiary, the finished sections could remain upon the hive, and it would be better to leave them there, as the heat arising from the bees would aid in curing it.

The World's Fair Bee-Exhibit.—Mr. J. E. Pond, of North Attleboro, Mass., writes as follows about the bee-exhibit at the World's Fair:

> Chicago is to have the World's Fair, if a location can be found. Has any stir, as yet,been made in regard to "bee-exhibits?" I presume that an exhibit will be made, and, on such a time and occasion, a big attempt should be made, or none, as we must show the world (if we show at all) that we are away ahead of all competitors. The West is the real ground for bee-industries. In the East, we produce but little honey, comparatively, still we wish the business to be boomed. By-and-by, when science plays a greater part than now—when the majority of our bee-keepers know something of entomology and natural laws—then bee-keeping will take a position among the other industries that will be firm and enduring. J. E. Pond.

Dr. A. B. Mason has full charge of the whole matter, and as soon as the final work in the Senate is done, and the President has signed the Bill, then full arrangements will be made for a grand bee-exhibit.

Increase and the Honey-Flow.—A correspondent sends the following questions for reply:

> 1. Will it affect the honey-flow if I take one or two combs out of a populous colony to make a nucleus about May 1? My locality depends upon white clover and basswood.
>
> 2. Please give the best method for securing increase, without lessening the honey-flow.

Dr. C. C. Miller, of Marengo, Ills., answers the above queries thus:

> 1. No; it will not affect the honey-flow in the slightest degree, but it *will* affect—and affect greatly—the amount of surplus honey secured.
>
> 2. I know of *no* method of increase that will not interfere with the honey crop, unless surplus can be obtained from something later than clover or basswood. I would rather take one or more colonies for increase entirely, and not weaken any intended for storing. C. C. Miller.

Appreciated.—The editor of *Home and Country*, New York, thus mentions our monthly:

> The Illustrated Home Journal has been recently paying our sanctum a visit, and we have become so interested in its pages that we hope it will come regularly in the future. It is a handsome magazine, nicely illustrated and published for only $1 a year; though fit to grace the parlor, study, or other retreat, of any household in the Union.

Francesco Crispi, the Italian Premier, is undoubtedly, since the retirement of Bismarck from the Chancellorship of the German Empire, the most potent and picturesque figure in European politics. A striking portrait of the Sicilian statesman is given in "Frank Leslie's Popular Monthly" for May, with a very interesting article entitled "Signor Crispi and the Italian Chamber," by the Hon. George Makepeace Towle.

QUERIES and REPLIES.

Bee-Space Between Sections When Tiering-Up.

Written for the American Bee Journal

Query 703.—Why is it necessary to have a bee-space between the sections in tiering up?—Illinois.

It is desirable.—A. J. Cook.

It is *not* necessary.—Dadant & Son.

It keeps them from being propolized.—A. B. Mason.

To prevent propolis on the sections, and killing bees.—C. C. Miller.

It is not necessary, but it is more convenient to have the spaces.—G. L. Tinker.

Perhaps by having a bee-space, the upper tier will have combs better joined to the bottoms of the sections.—M. Mahin.

It is more convenient, keeps the sections freer from propolis, and prevents the crushing of bees.—R. L. Taylor.

To faclitate the passage of the bees, and to prevent them from propolizing the sections.—Mrs. L. Harrison.

So that the bees will not glue the whole thing together; and to prevent killing bees in manipulation.—G. M. Doolittle.

A "bee-space" between the sections is not absolutely essential; but a *bee-passage way* is necessary for the bees to pass from one tier to the other.—J. P. H. Brown.

To prevent the bees from gluing the sections together, and to give free circulation of bees, etc., to all parts of the sections.—J. M. Hambaugh.

I do not know that it is, but *I* always do, because I like the plan. I can tier up faster, because I do not have to smoke the bees so much to drive them out of the way.—Eugene Secor.

I do not see any necessity, but perhaps I do not understand the question. I always put the sections on top of each other, without a space, and I suppose that is the rule.—J. E. Pond.

Just try tiering up awhile, and you will find out! Bees have a faculty of getting in the way, and if no bee space is arranged, many bees would be crushed, even with the most careful handling.—C. H. Dibbern.

In my yard last season I had about 40 hives with a bee-space above or between the cases, and 20 with no space, the slats in the upper case resting on the lower sections, and I could see no difference in the honey. You can work faster and kill no bees, if you have a bee-space of 5-16 of an inch.—H. D. Cutting.

So that the supers may be easier handled. A slatted honey-board over the frames will be fastened to the frames, but the super with a bee-space between it and the honey-board, will not be fastened, except with a little propolis around the edges, where the parts touch. I like all supers to have a bee-space above and below the sections, so that when removed from the hive, it may be put upon a board without crushing bees, and made secure from robbers.—J. M. Shuck.

I can see in practical work as well as in theory, a great many reasons why there should be a bee-space between all the departments of the hive when tiering up. If there was no bee-space, hundreds of bees would be smashed every time a section-case was placed on a hive; and if it was possible to smoke all the bees out of the way, so as not to kill any of them, the bees would glue the bottoms of the section-cases fast to the tops of the brood-frames, or whatever it was made to rest on, if no bee-space intervened. It will not do to talk about doing away with the bee-space.—G. W. Demaree.

It is not absolutely necessary to have a bee-space between the sections in tiering up; however, there are slight objections to having the sections rest upon each other. Some of them may be enumerated even in the short space allowed in this department. We just now call to mind—glue, stings, mashed bees, annoyance, bottoms of sections half pulled off—and a few other little things like that. The bee-space will save all this, and about three-fourths of the time which would be expended in manipulating the hives; but if you are keeping bees for the fun of it, never mind about the time and annoyance.—James Heddon.

It is desirable, if not absolutely essential, and prevents the destruction of bees and the deposit of propolis there.—The Editor.

Distance Hives Should be from the Cellar Bottom.

Written for the American Bee Journal

Query 704.—How far from the ground should the hives be placed in a dry cellar, when wintering bees?—Minnesota.

About one foot.—G. L. Tinker.

From one to two feet.—J. P. H. Brown.

Ten or twelve inches.—R. L. Taylor.

Perhaps twelve inches is far enough.—M. Mahin.

From six to ten inches.—Mrs. L. Harrison.

Eighteen inches to two feet.—J. M. Hambaugh.

Not nearer than five or six inches.—J. E. Pond.

A foot or two; but we have wintered bees fairly in hives not over six inches from the ground.—Dadant & Son.

Four inches, or just so that the air can circulate well beneath.—A. J. Cook.

In my cellar the bottom tier is six inches from the floor to the entrance, four tiers high.—H. D. Cutting.

As a matter of convenience, mine are about four inches. More, I think, would be better.—C. C. Miller.

I raise the lowest tier of hives nine inches from the bottom.—G. M. Doolittle.

I presume about 12 inches would be safe, but my experience with cellar-wintering of bees is limited, and entirely experimental.—G. W. Demaree.

I do not know; but the lowest tier of mine is 8 inches from the ground, and the top tier about 6 feet.—A. B. Mason.

I doubt if any arbitrary rule can be laid down. It depends upon the cellar. I place mine about a foot from the bottom, but I do not know that it is necessary.—Eugene Secor.

High enough so that the temperature of the atmosphere in which the hive stands, will not fall below 45 degrees, Fahr. The floor of the cellar is likely to be the coldest part of it.—J. M. Shuck.

The hives ought to stand not less than a foot from the floor. I have placed them as low as 4 inches, but the lower hives seem to winter with more loss than those placed from 2 to 4 feet high.—C. H. Dibbern.

If the cellar has no bottom either of cement, wood or anything else, the hives should be placed somewhere from an inch to 8 feet, according to conditions, and how liable the bees are to die with the bee-diarrhea.—James Heddon.

They should be high enough to allow a circulation of air—say 6 inches or more, according to the size of the cellar and the number of colonies to be put into it.—The Editor.

Wood for Feeder Bottoms.—A correspondent sends this question for reply in the Bee Journal:

Will Mr. James Heddon please state what he considers the best kind of wood, and thickness, for the bottoms of his large feeders?

Mr. Heddon answers the above query as follows:

Either whitewood, basswood or pine will do very well for the bottoms of my feeders. Almost any wood—the lighter the better—will work all right for the following reasons:

1. We thoroughly paint the feeder inside and out, bottom and all—not the divisions, but simply the case proper, or box, before the divisions are put in, which, of course, will include the bottom-board.

2. A very important feature, is that the bottom-board comes within the sides and end pieces, and the whole is made of just such a size that if any leaking should take place, in or between the bottom and the sides and end pieces, it could not leak anywhere except *inside the hive.*

Cones of Honey.—There is something new popping up every now and then in the honey market reports. Some few years ago these report-makers insisted on reporting strained-honey as in the market, when there was not a pound of strained honey to be found in the California market. With the market-reporter all honey not in the comb was strained honey, and the extractor and extracted honey was a fiction fabricated by the bee-keeper. Next came the "warranted, guaranteed strictly pure," orange-blossom honey. The market reporter rolls this sweet quotation under and over his commercial tongue with much gusto, and it will doubtless serve him a long time, but it is pure humbug all the same. But to the Los Angeles *Times* market reporter—Pasadena edition—belongs the discovery of "Honey, 1-pound cones, 15 cents; 2-pound cones, 30 and 35 cents." Happy Pasadena! As far as we know that city has the pure and only original honey cones in the world. What next!—*Rural Californian.*

Convention Notices.

☞ The next meeting of the Carolina Bee Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. Lyles, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. Fuller, *Sec.*

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. Benj. E. Rice, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. Hunter, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. Yocom, *Sec.*

CORRESPONDENCE.

WINTERING.

Preparing Bees for Winter—A Simple Bee-Feeder.

Written for the American Bee Journal

BY ROBERT CARVER.

In this part of the country, the season of 1889 was a poor one, as far as surplus honey was concerned, many of the colonies putting in none at all, and not only so, but when time to pack for winter, many of them were short of stores; to make up this deficiency, I fed the weak colonies with the overplus from the supers of the best colonies, and about 500 pounds of confectioner's standard A sugar, and so put them in condition, as I thought, to last them until March.

I packed them in boxes on the summer stands, four hives in a box, two facing the east, and two facing the west, alternately. My hives are all of the same pattern, 8-frames about 8x16½ inches; over each hive I put a case of chaff about five inches deep, and the same size of the hive, with a cloth bottom to come next to the bees; but before placing the case over the bees, I lay two strips of wood about ¾-inch thick across the frames to hold the chaff up, so that the bees can pass over from one frame to another to get their stores. These strips of wood should be nearly two inches apart. I then put the board cover on top of the chaff case—the upper end of the cover to be held up from the case about the thickness of a shingle-nail, so that the sweat and dampness can escape from the chaff. Then all over and around these, I pack with dry planer-shavings from 4 to 6 inches thick, then over all I put a good double-board cover, which makes them secure, except at the entrance.

From the hive to the outside of the box I leave an entrance-way 3 inches wide by ¾-inch deep, which is left open all winter. I next put on a storm-porch on each side of the box, long enough to cover the entrance of both hives, and giving the bees an air-space of nearly one cubic foot of space for each hive, and tight enough so that the bees cannot get out, and snow and mice cannot get in.

The bottom of the storm-porch is about an inch lower than the entrance-way, so the bees can carry out their dead and drop them down into the porch; and the bees can walk out in moderate weather.

Next, I cut a nicely-fitting hand-hole in front of each hive, so the apiarist can open occasionally to keep the entrance clear of dead bees, or to give the bees a flight, and to close the bees in during bad weather in the spring, when it is not safe for them to fly.

I have had doubts as to whether bees need water in winter confinement, when they are kept in without an opportunity of a flight from November until April, but I think that I have proved the fact that they will do well confined for that length of time.

I packed my bees last fall about the last week in October, and closed them in about the middle of November, and they were not out again until April 2, 1890. I had, after selling a few colonies, 217 colonies, fall count, some of which were put into winter quarters quite light as far as food was concerned; and March being the hardest month of the winter, it was difficult to get at them in that month, so I let them go until April; the result was that several colonies run out of food and died, a few others proved to be queenless, so they are quite light, but aside from these, I have about 190 promising colonies, except that many of them will need to be fed some to bring them through to flowers.

I am now feeding nearly 200 colonies each day, and for the benefit of some one, who, like myself, may at some future time be under the necessity of feeding, I will describe a cheap feeder which I am using, and I must say that, after using various kinds and styles of feeders, at quite an expense of time and labor, this gives the best satisfaction for early feeding, of any that I have used.

It is simply a shallow tin dish, 3½ inches long by 2 inches wide, and ½ inch deep; placed across the frames over the bees, and under the chaff case, with a strip of wood laid across the top of the dish from end to end to hold up the cloth, so the bees can have free access to it.

After the dish is placed, and the case adjusted properly, to get the food into it I used this plan: I had on hand some sap-spiles about 4 inches long, made of maple timber, and turned to drive after a ⅝-inch bit, with a hole bored through the spile about the size of a cell of worker-comb. I then took a piece of paste-board about 1½ inches square, through which a ⅝-inch hole had been bored; the spile will project through this paste-board about ½ inch. Now remove the chaff down to the feeder, cut a hole through the cloth close to the ½-inch piece that is laid over the dish or feeder, put the spile through the cloth, with the paste-board resting on the piece that is laid across and over the cloth. Pack the chaff around the spile, and it is done.

Next, have a large spring-bottom oil-can, and a tea-pot full of hot syrup—as hot as can be, and not burn the bees. I use a common market-basket to carry them in, so that I can set them down to raise and lower the cover to the box as I go along (I have fed 32 colonies in 16 minutes, including opening and closing the covers). Have a short piece of wire to reach down into the feeder of very weak or doubtful colonies, to ascertain whether they have eaten it up clean. All good colonies will devour it in a hurry. A little testing of the "can" before you begin, will tell you the quantity that you want in each feeder.

Manton, Mich., April 9, 1890.

SUPERS.

A New Super for the Open-Side Sections.

Written for the American Bee Journal

BY JOSHUA BULL.

On page 232, Mr. M. M. Baldridge calls "for something better than what we have been using" in the line of section supers. Now I would like to say to all interested in this subject, that I use a super (a device of my own), which I call "The Victoria Super;" it combines nearly all the features which Mr. B. mentions as desirable, and one important point which he does not speak of, and may not have thought of, viz: It is especially adapted to the use of open-side sections.

This super is provided with slats in the bottom for the sections to rest upon, the bottom slats being made just the pattern of a one-piece section before it is folded up, so that when the sections rest upon them in the super, the bottom of the section is completely protected from the bees; then by means of "followers" in one side and one end, and thumb-screws to adjust them, the sections are tightly pressed together, both sidewise and endwise, so that it is not possible for the bees to inject any propolis between them.

Every section is held perfectly true and square, and so firmly in place that the super can be turned bottom upwards, and tumbled around in almost any shape, and the sections will not move nor get out of place. The sections are completely protected from the bees on all sides, except the top. It can be used with or without separators, at the option of the operator.

The Victoria super was first devised for the express use of open-side sections, but it is equally well adapted to any other kind. When open-side sections are used, it allows a bee-passage all around the outside of the sections, thus obviating the difficulty of the sections being glued to the ends of the super.

When the sections are to be taken out, just loosen the thumb-screws, remove the followers, and then the sections can be lifted out at leisure without the slightest danger of injuring the comb.

I have used these supers the past two seasons; and I think that there is nothing like them. I do not make any to sell; they are not patented, and everybody is at liberty to make and use as many as they wish, and the more they are used the better I shall feel pleased. I sent one of these supers to the International Bee-Keepers' Convention at Brantford, Ont., last December, in order that those who attended that meeting might see how it is constructed, and make and use them if they desired to do so. I wish Mr. Baldridge would give them a trial.

Seymour, Wis.

LARGE HIVES.

Bee-Culture and Bee-Keeping—the Difference.

Written for the American Bee Journal

BY D. MILLARD.

A great many people seem to have an idea that bees will not only work for nothing and board themselves, but will, if furnished with what Josh Billings would have called "an automatic, self-adjusting, non-swarming, ever-controllable bee-hive," leave their owners nothing to do but to crate the honey, as the hive and bees will discharge the filled sections, as would an ordinary brick-machine.

Again, others seem to think that all that is required is one kind of a repository of the capacity of an ordinary freight car, that while the bees are filling in at one end, they can be unloading at the other—no theoretical knowledge or practical experience being required, and just manual labor sufficient for healthful exercise!

Prof. Cook has said that there is a vast difference between being a *bee-keeper* and a *bee-culturist*. If one has no desire to become a practical apiculturist, but merely wishes to keep bees, a huge box, or honey-house, as described on page 203, is perhaps all that is needed. If the season is favorable, he will probably get some honey without much effort on his part; but if the season is unfavorable, he will get neither honey nor increase. I experimented with such a hive 40 years ago, and, as Mr. Heddon says, one trial proved sufficient.

CUPBOARD BEE-HIVES.

There are a great many such hives in use in this vicinity at the present day. They are called "cupboards," as they have a door in one side, with a glass panel, and a knob attached, that gives them the appearance of a piece of dining-room furniture. It has openings through the upper side, over which are placed surplus boxes, which, strange to say, are sometimes occupied and filled, or partly so.

It has 16 frames below, that might barely be considered movable; they are 15½ inches deep, by 10½ inches wide, with a horizontal cross-bar placed a little below the centre of the frame, beneath which is usually built only drone-comb. They are usually put in the upper room of a dwelling-house or wood-shed, with an opening through the wall for the bees to pass in and out.

These hives have been pronounced as non-swarming, which is true with some, but in a good season the bees in a majority of them swarm out from once to four times.

I have often been asked by some admirer of these "cupboards," for my opinion of them; and not infrequently it would be received unpleasantly, if ever so kindly given. Over three years ago I sent a description of one to a bee-paper, asking advice as to its probable utility for securing comb honey, hoping thus to get an opinion through the query column, which would somewhat relieve me; but the editor sent it back with a big "NO! the shallower the frames, the better;" thinking, no doubt, that the question was of too little importance to give it further attention. Nevertheless, nearly 500 such hives are now in use in this county alone, and by nearly that number of single individuals, who are mostly farmers, and seldom keep more than one colony to each farm; yet a majority of these men pronounce them a success, or at least they prove satisfactory to them, and I doubt if half a dozen of the whole 500 ever take a bee-paper of any kind.

These hives are all manufactured and sold by a man living in this State, who has been in the business for over 20 years. A near neighbor of mine has had one in continual use for about that length of time, and his bees of to-day are all descendants of his first queen. He usually secures some surplus honey, and breeds up bees enough that ought to secure him three or four times as much more, and would, were it not stored in the huge brood-chamber below. This extra amount of stores, together with the vast amount of space, for which there is no provisions made for reducing, all to be kept warm, often proves too much for the bees. The cluster becomes too much spread, and the outer bees chill and fall to the bottom, until in the spring the colony is reduced to, or below, the size of an ordinary colony, when they slowly re-build again. There has been an unnecessary amount of stores, together with too large a space for the capacity of the queen. This extra amount of stores is carried over and soiled until unfit for anything but the bees; whereas, it should have been stored where it could have been taken off as surplus, and the bees wintered in less space. If they die out, as they often do, another swarm is hived upon the same old combs, a large portion of which is store or drone comb; and which the peculiar construction of the hive has made it impossible to remove.

Another great objection to this system of bee-keeping is this: The worse than useless rearing of so many drones, all of which perhaps are from an inferior queen, with no possible way to get at and displace, any more than would be with a log gum. This immense amount of inferior drones, more or less affects the grade of all the bees for miles around, thus making thorough bee-culture practically impossible within their range.

Mendon, Mich.

PRIZE ESSAY.

Extracted Honey—Its Production, Use and Sale.

Written for the American Bee Journal

BY S. L. WATKINS.

Extracted honey is one of Nature's purest sweets—it is the pure liquid honey, just as it comes from the flowers. By the present methods of management, and the use of the honey-extractor, the honey is separated from the virgin combs without heat, or pressure. There are no dead bees, no crushed brood, pollen, or bee-bread—nothing but the clear, pure honey, just as it is taken from the flowers by the bees, entirely free from all taste of bee-bread, and foreign substances.

The antique method of taking the honey from the combs was really a compound of pollen, young bees, bee-stings, etc. It is quite easy to see how unhealthy honey obtained in this manner would be.

To extract the honey, the comb is taken from the hive, the bees shaken, or brushed off, and the comb then taken to the extractor, uncapped, with a knife made especially for that purpose; two to four frames, according to the size of the extractor, are placed in at a time; the crank is turned around a few times, and the honey is thrown from the combs by means of centrifugal force, without injuring the combs; the combs are reversed, so that the other side may receive a similar "whirl."

The combs are now ready to be returned to the hives. Thus the combs are saved, and bees waste no time or honey in constructing new ones.

From recent experiments, it is conceded that it requires from 12 to 15 pounds of honey to make one pound of wax, thus it is plainly seen that the use of the honey-extractor saved the 15 pounds of honey required for wax, to say nothing at all of the time consumed. Again, the honey obtained in this way is perfectly pure, consequently it is more pure than even comb honey—the wax in comb honey, it is said on good authority, being indigestible.

Extracted honey can be put to a great many uses; it is equal, or even better, so a great many claim, than sugar for preserving fruits.

Honey is a true brain and nerve tonic; it favors the cure of all pulmonary diseases, coughs, colds, etc.; it is invaluable for making cakes, cookies, puddings, pies, cooking green and dried fruit, making vinegar, beverages, etc.

Honey is now used to a great extent in manufacturing a great many different kinds of candies; also for preserving meat. It would be difficult to think of anything more strengthening and nourishing than this product, fresh from Nature's laboratory.

The many uses to which honey may be put are too numerous to mention in a single article. The use of extracted honey is becoming world-wide.

One of the greatest secrets in the extracted-honey business, is to have all of the extracted honey thoroughly ripened before putting it on the market. A great many have destroyed their home market, by selling green, or unripened, honey. Honey ripened in the hive is far better than that ripened artificially; it preserves the delicate aroma better, and it is quite easy to distinguish the source of bloom from which it was gathered. In this climate it requires from two to four weeks to ripen sufficient before taking it off.

Honey that contains a great percentage of water, requires a longer time to ripen. Honey that has been gathered from the various wild sages of California, when properly ripened, has a sparkling clearness, and the flavor is pure and exquisite.

Honey gathered from the many varieties of penny-royal, and some of the species of mints, has a strong, aromatic flavor, so as to be somewhat objectionable. New, or unripened honey, sometimes has a disagreeable odor and taste.

PACKAGES FOR EXTRACTED HONEY.

Stone crocks, or jars, are splendid to keep extracted honey in, if you are going to keep it any length of time; and if it candies, it can be easily cut out at any time when wanted.

I always draw the honey out of my honey-tanks into small glass jars, and five and ten pound cans, before it starts to candy.

A great many kinds of honey will candy sooner or later—in fact, that is one of the best evidences of its purity; adulterated honey will not candy. To bring it to the liquid form, after it has candied, heat the can slowly, by placing it in a vessel of warm water—not too hot, so as to scald it—and in a few moments it will return to the liquid form.

Extracted honey, to sell well, should be put up in neat, attractive packages—the fine appearance of an article is sometimes half its sale. The Mason and Muth jars are fine for retailing extracted honey in the home market.

In California, in most of the large apiaries, the honey is run from the extractor into tanks, holding from 1,000 to 20,000 pounds.

After the honey is settled, and if the producer intends to dispose of much of it in his home market, he draws it off into five and ten pound cans; but if he intends to ship it any distance, he uses the 60-pound cans, two in a case, as shown on page 270.

Extracted honey should be kept in a dry, warm room; if the room is damp, it draws the moisture, which, in time, destroys the aroma, and makes the honey thin and watery.

The past was an "off year" in the extracted honey business here. On account of a short crop, prices have ranged from 25 to 50 per cent. better; so that producers who have secured half a crop, have made pretty satisfactory returns.

One thing can be said in favor of California honey, viz: Nineteen out of twenty cases are absolutely pure honey. Extracted honey is at such a reasonable price that there is nothing that it can be adulterated with, that would pay to do so.

The honey produced in California is, without doubt, the finest in the world, both as regards color and flavor. Notwithstanding the discouragements of dry seasons now and then, the extracted-honey business is bound to increase. The honey crop in this State for the year 1889, was 1,092,900 pounds.

Placerville, Calif.

OHIO.

Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal

BY MISS DEMA BENNETT.

The Ohio State Bee-Keepers' Association held its annual meeting in Cleveland, O., on Feb. 19 and 20, 1890.

Owing to the absence of the President, Mr. H. R. Boardman, and the Vice-President, John Calvert, the convention was called to order by the Secretary, Miss Dema Bennett, when, Dr. C. C. Miller, of Illinois, being present, he was called upon to preside until the arrival of the President.

Mr. F. A. Eaton was appointed Assistant Secretary.

The following is a list of those attending the convention:

Dr. C. C. Miller, Marengo, Ills.
Dr. A. B. Mason, Auburndale, O.
E. Hanchett, Cleveland, O.
J. F. Moore, Rockaway, O.
H. F. Moore, Rockaway, O.
E. R. Root, Medina, O.
F. G. Fenton, Bluffton, O.
O. J. Terrell, North Ridgefield, O.
N. T. Phelps, Kingsville, O.
Marcus Holtz, Tiffin, O.
J. S. Barb, Oakfield, O.
N. Case, Orangeville, O.
B. F. Jenkins, Willoughby, O.
Dr. I. N. Noland, Independence, O.
Bruce Hobbs, Danville, O.
B. T. Bleasdale, Cleveland, O.
C. A. Graves, Birmingham, O.
J. R. Chaffee, Brecksville, O.
C. R. Page, Streetsborro, O.
C. A. Camp, Painesville, O.
J. B. Hains, Bedford, O.
M. E. Ellsworth, Hudson, O.
Daniel Bishop, Harpersville, O.
E. M. Johnson, Mentor, O.
A. I. Root, Medina, O.
O. J. Post, Chagrin Falls, O.
F. A. Eaton, Bluffton, O.
S. F. Newman, Norwalk, O.
D. B. Lovett, Crestline, O.
H. R. Boardman, East Townsend, O.
Daniel White, New London, O.
A. Webster, Painesville, O.
Theo. F. Shephard, Cleveland, O.
Asher M. Coe, Coe Ridge, O.
Samuel Patterson, Berlin Heights, O.
Dr. G. L. Tinker, New Philadelphia, O.
Warren Pierce, Garrettsville, O.
B. Wells, Fostoria, O.
O. D. Newcomb, Burton, O.
W. A. Biteman, Westminister, O.
Chas. McClave, New London, O.
H. M. Parker, Plymouth, O.
G. V. E. Mellinger, Canton, O.
B. H. Woodman, Painesville, O.
C. H. Coon, New Lyme, O.
A. R. Munn, Macedonia, O.
Dr. H. Besse, Delaware, O.
J. H. Smith, Canton, O.
Geo. Spitler, Mosiertown, Pa.
S. M. Turner, Dempseytown, Pa.
C. H. France, Erie, Pa.

LADIES.

Mrs. A. B. Mason, Auburndale, O.
Mrs. A. I. Root, Medina, O.
Mrs. E. R. Root, Medina, O.
Mrs. J. B. Hains, Bedford, O.
Mrs. B, T. Bleasdale, Cleveland, O.
Mrs. H. F. Moore; Rockaway, O.
Mrs. O. D. Newcomb, Burton, O.
Mrs. P. Tremolin, Garrettsville, O.
Mrs. Frank Foster, Cleveland, O.
Mrs. E. M. Johnson, Mentor, O.
Mrs. N. Case, Orangeville, O.
Mrs. C. H. Eynon, Cleveland, O.
Mrs. E. C. Smith, South Cleveland, O.
Mrs. L. H. Brown, Bissells, O.
Miss Hattie Brown, Bissells, O.
Miss Constance Root, Medina, O.
Miss Anna Johnson, Mentor, O.
Miss Dema Bennett, Bedford, O.

The reading of the minutes of the last meeting was dispensed with, and the first essay, by H. D. Cutting, of Clinton, Mich., was called for, which, in the absence of its author, was read by the Secretary, as follows:

Producing Comb and Extracted Honey in the Same Apiary.

Locality is the first thing to be taken into consideration. Many localities produce honey dark in color the entire season. In this case, it is best to work entirely for extracted honey. In many localities honey comes in so slowly, that the bees will not get it in presentable shape for market; again, it is best to work entirely for extracted honey.

If in a good locality where white clover abounds, followed by basswood, and the bees bring in large quantities of honey every day during the honey-flow, then it is best to work for comb honey—*provided* you are adapted to run an apiary exclusively for comb honey.

I will venture the assertion, that not more than one honey-producer in ten, is qualified to produce and market comb honey successfully. Now this may seem strange to many, yet it is a fact. Go where you will, you will find slovenly honey-producers—persons not adapted to the handling of comb honey. When you find a man that has the assistance of a good woman, you will find comb honey in good shape for market. Almost invariably when you find a woman at the head of an apiary, you will find comb honey in fine condition—they are adapted to the production of comb honey.

If you go into an apiary during extracting time, and find a person with honey on his hands, plenty on his clothes, nearly as much on the floor as in the can, all implements daubed with honey, the handle to the extractor covered with honey, with no pan of water and cloth handy to clean up any honey out of place—then and there you will find a person not adapted to handle comb honey. If he should be so fortunate as to secure a good crop of honey, he would spoil it all with his manner of handling it; and this is not all—his honey would spoil the market for some more-favored comb-honey producer.

When honey is taken to the market with propolis on every section, with the producer's "trade mark" in the shape of dirty finger-marks on every package, then the dealer will see at a glance that it is not in proper condition, and he will give from two to three cents per pound under the regular market price. When the neat and tasty producers brings their product to market, they are met with—"I have just bought 75 pounds of Mr. So-and-So, for so much;" and you are expected to take the same.

If persons who have no taste to have things look nice, would confine themselves to extracted honey, then the market for comb honey would be much better in many localities. If the persons working for extracted honey would confine themselves to that product, they can produce honey at a less cost per pound than where comb and extracted is produced in the same apiary. Each production has its own system, and they do not work well together.

I think that it is best to adopt one regular system, and work to that as nearly as circumstances will allow, bring "all things" to that system—have an object point and work to it, if you wish to succeed as a honey-producer; and always remember that "locality and circumstances" must govern in all cases.

H. D. CUTTING.

In the discussion which followed, Dr. Mason said that localities were so different in honey-resources, that it was hard to fix a rule. What would apply to one locality, would not apply to another. Work for comb honey when honey is coming in freely, and for extracted honey afterward. Get ready—get supplies in time.

A. I. Root—To produce comb honey especially—in fact, any honey—you must be ready in time.

Dr. Miller wants more supplies than he thinks he will need—better have some left over than to be short when needed.

J. B. Hains produces about one-third comb honey, and two-thirds extracted. He always has the best results in working for comb honey in the flush of the honey-flow; after that he takes off the sections and uses the extractor. This prevents having a lot of unfinished sections at the close of the season. He works the home apiary for extracted honey and queen-rearing; prefers light-colored combs, as the honey will be nicer—dark brood-combs will make the honey darker. We must be ready for the season in advance.

Dr. Mason uses old combs in extracting, and says that his honey is A No. 1.

J. F. Moore produces about one-fourth comb honey, and the rest extracted. It takes more time to work for comb honey. If he works for that alone, the bees will swarm more. Some customers want comb honey, and some want extracted, and by working for both, we can please both classes of patrons.

H. F. Moore—It gives a man a better name where he produces both kinds of honey. People have confidence in a comb-honey producer, that they do not have when he has only extracted honey for sale.

It was generally agreed that the main point was to be ready for the honey-flow when it comes. Three-fourths of those present produce both comb and extracted honey in the same apiary.

WOMEN IN THE APIARY.

The question of woman's help in apiaries was next discussed.

Dr. Mason would rather not have the women around, while F. A. Eaton could not get along without the help of his wife, as she will do the work up in better shape than he would. While he is doing the heavy work, his wife puts foundation in sections, and does a great deal of other light work.

H. F. Moore finds that women are the best hands to keep things in order.

Dr. Mason knows that women are a wonderful help, but, to be serious about it, many men are killing their wives to keep from hiring, and he thought too much of his wife for that—except, perhaps, at swarming time.

Dr. Miller said that if he goes to an out-apiary without the women, he cannot find anything, and when he wants to go home, all the tools are scattered around the yard. Women straighten things up better than men do, and keep them in better shape.

A recess of ten minutes was then taken, after which the President, Mr. H. R. Boardman, being present, called the convention to order, and appointed the committees.

A. I. Root then addressed the convention, his topic being,

SHALL WE ATTEND CONVENTIONS?

Mr. Root believes most heartily in attending conventions, because it pays. Even though it does not always pay in dollars and cents, it pays to get away from cares and business—to get acquainted with those engaged in the same pursuit. We also forget self. He used to think that we ought to stay at home, but Prof. Cook got him out of that notion, and he finds now that he was mistaken.

If you attend, take a part in the discussions, and learn to talk—he was formerly bashful, but had gotten over it. He had been accused of talking too much, but that did not offend him. He related how Prof. Cook, at a Michigan convention, made each person present in turn say something on the subject which was being considered, and he thought that it was a good plan. He would also make the question-box a prominent feature of the convention.

A short discussion followed, in which Dr. Miller urged those who attend conventions to speak plainly—put *stress* on the consonants, show that you *feel* what you say. He would not take time to read the minutes, which nearly all have read before.

H. F. Moore said that to make a convention interesting, be there yourself, even though it costs money. The information one gets, pays. Tell your friends to come and participate; they will then thank you.

F. A. Eaton has attended the meetings of this Association for several years, and it has paid him in money value, to say nothing of the gain in the social part of such gatherings.

Dr. Miller, at a convention, saw a little device, from which, he had no doubt, came the T super.

After some miscellaneous business, the convention adjourned to meet at 1:30 p.m. DEMA BENNETT, *Sec.*

CANADA.

Report of the Haldimand Bee-Keepers' Convention.

The annual meeting of the Haldimand, Ont., Bee-Keepers' Association was held at Cayuga, on March 22, 1890. In the absence of the President, Mr. James Jack was called to the chair. The minutes of the last meeting were read and confirmed.

Among the subjects discussed was,

SPRING MANAGEMENT OF BEES.

Mr. Kindree said that the best way to manage for spring, was to see that the bees had plenty of honey in the fall. He favored crowding the bees on as few frames as possible, and keeping them warm.

Mr. Rose agreed with Mr. Kindree as to crowding bees on a few frames, and keeping them warm; he did not approve of spreading combs too early. Packing in the spring is of more importance than in the fall.

The chairman said that he had not much experience in spring management, but gave the plan of others.

The election of officers resulted as follows: President, Frank Rose; Vice-President, Wm. Kindree; Secretary and Treasurer, E. C. Campbell; and Directors, James Armstrong, Israel Overholt, John Bell, Robert Coverdale, and F. Mehlenbacher.

REARING QUEENS—INCREASE.

Mr. Coverdale asked whether it was advisable to start to rear queens in April so as to divide and make new colonies? The general opinion of the meeting was against the practice.

Mr. Overholt asked for the best way to prevent increase of swarms. Mr. Rose said that his plan was to put on extra stories, giving them plenty of room, and putting two swarms into one hive.

It was decided that this Association affiliate with the Ontario Bee-Keepers' Association, and that the Secretary be instructed to send $5 to the Secretary of the latter Association.

The next meeting of this Association will be held at Cayuga, on Saturday, May 17, an 1 o'clock.

E. C. CAMPBELL, *Sec.*

BEGINNING.

An Experience in Commencing to Keep Bees.

Written for the American Bee Journal
BY J. P. SMITH.

The beginner has to commence at the foot of the hill, and learn by experience. True, he should have some knowledge of bees and their ways, in order to begin. He needs to read "Bees and Honey," or some other good bee-book, and should take one or more bee-periodicals.

For about eight years previous to 1886, I had *tried* to keep bees in box-hives, but I failed to *keep* them. Part of the time I would have some, and then again some spring would open and find me destitute. I would then buy a colony or two more. I continued thus until the summer of 1886, which found me entirely without bees, and about as destitute of bee-knowledge. There were none but brown or German bees anywhere in this vicinity, and none but box-hives. If *I* could succeed, any one may. I had one qualification, however, that may be deemed requisite, viz: I had a hungering and thirsting for a knowledge of bees and their habits.

In the midst of these surroundings, I began to read the AMERICAN BEE JOURNAL, and from it came the first ray of light. I learned of the book, "Bees and Honey," written by Thomas G. Newman, which I procured, when more light came.

A neighbor offered me the bees from two colonies that he was going to brimstone for the honey. I then bought two movable-frame hives, with necessary fixings to begin bee-keeping, including a bee-smoker. By the time I had the "transferring tools" all together, it was Sept. 25. I read that "June is the month of swarming, and the best time to transfer bees from the common to movable frame hives is about the season of swarming;" but, late as it was, I loaded the tools into a wagon, and started for the bees.

With unpracticed hands, in an awkward way, I succeeded in filling the frames with empty combs, the owner reserving all the honey. I left them on the old stands to fasten the combs in the frames, and in three days I brought them home, taking off the "wired sticks," as the combs were well fastened. I prepared some feeders, and sugar syrup, by taking eight pounds of granulated sugar to two quarts of soft water, and bringing it to a boil over a slow fire, skimming it, and being sure not to burn it. I fed it at night, both at the entrance and on top of the frames.

I next got a blank book for a "bee-register." On the first page I entered "No. 1; transferred Sept. 25, 1890." On the fifth page I entered "No. 2; transferred Sept. 25, 1886." I marked the hives to correspond. These hives have not been empty since, and the bees in them are in good condition.

Using the smoker, I examined the colonies occasionally, watching the increase of stores, until each had 30 pounds of nicely capped honey. About Nov. 10, I surrounded the hives with a box six inches larger on all sides than the hives, preparing a winter passage out from the entrance. I put Hill's device on top of the frames, covering them with burlap, and a chaff cushion six inches thick. I filled the space between the hive and the outside box with wheat chaff (I deem dry planer shavings just as good), and left them on the summer stands for the winter.

Sunapee, N. H.

MIGRATION.

Experience with Migratory Bee-Keeping on the Mississippi.

Written for the American Bee Journal
BY BYRON WALKER.

It appears from certain articles recently published in the AMERICAN BEE JOURNAL, that several parties, at least, are becoming somewhat concerned as to the out-come of my migratory scheme. Having already presented my views at length, while this topic was the special one for discussion in the *Review*, I have no desire to discuss the subject further at this time. Still, certain statements with regard to my doings in the past, and intentions in the future, on the part of these correspondents seem to require some explanation by me.

On page 145, Mr. M. M. Baldridge, in commenting on this migratory enterprise as conducted by me last season, concludes that it has resulted in failure, compared with what might have been the result, had the same number of colonies been purchased in Wisconsin instead of Tennessee, since I only secured some 9,500 pounds of honey—about two-thirds comb—from about 100 colonies, at an expense of

$700, including first cost of bees, while he obtained about 7,000 pounds of extracted honey from 50 colonies. True, he obtained a larger ratio of increase than I did, but as bees worked for extracted honey do not commonly winter as well as those worked for comb honey, the difference in this respect will not be apt to be an important item.

Perhaps the figures given justify Mr. B's conclusion ; if so, I fail to see why, especially as his bees were located (if I am correct)on a selected, unoccupied location, while mine, at both ends of the route, were almost of necessity placed on preoccupied ones.

In writing upon this subject before, I gave my reasons for the partial failure of this venture ; but while Mr. B. has read these, he has seen fit in writing up this matter, to ignore them altogether, while at the same time he would have us believe that he, a veteran specialist, while handling but 50 colonies of bees, allowed half of the harvest to be wasted.

Again, Mr. B. tells us that it will not pay to make more than *one* move in shipping bees from New Orleans to Wisconsin ; and that this becomes *absolutely necessary* (Italics are mine) because of the loss in bees and brood incident to the journey. Now I can conceive that this might be true, if the colonies shipped were not provided with water, and the shipment delayed until the hot weather that comes in May, in that latitude (as Mr. B. thinks best) ; as under these conditions, the long confinement, and constant jarring, inseparable from such a trip by rail, could hardly result otherwise than in depleted colonies.

Mr. Stevenson, of St. Charles, Mo., who has had not a little experience in this direction, prefers (if I mistake not) to ship early in April, after the main harvest from willow has been secured. This would give plenty of time to stop in Arkansas or southern Tennessee for the poplar flow, even when shipping by boat ; and as the weather is then far more favorable for shipping, and the distance in this case being only about one-third as great, the liability of loss is not an important factor. In fact, if the bulk of the old bees are sent in cages in advance, by express, this risk wold be trifling indeed ; and as a much larger number of colonies in this event can be safely sent in a given compass, the expense would not be much greater. What would be true in this instance, would also apply to other moves, to points further north, to secure other harvests.

By the by, I fail to understand how Mr. B. reconciles the very positive statement given above, with that made in a letter which I now have before me, bearing no very ancient date, in which he favors two stops instead of one—the first in Tennessee or Kentucky, and the second, and final one, in Illinois or Wisconsin. Mr. B. says further : "It is Mr. Walker's idea to come up the Mississippi by boat, to catch the honey-flow *along the route* to Wisconsin (Italics are mine). When he has gone through the mill, as I and some others have," etc. No doubt "the mill" referred to was the floating one started by C. O. Perrine, through which we are told that he succeeded in running $5,000 in cash and 2,000 colonies of bees on its trial trip. Well, I am happy to say that I had nothing to do with that ill-conceived and worse executed project ; and fail to see what bearing it can have on one that is properly planned and conducted.

My reasons for regarding the plan of moving bees up this river by boat for securing different harvests, as a practical one, have been published, and need not be repeated here. I will simply say that the plan included only one more stop than Mr. B. favored, but proposed starting a month earlier than he would.

But Mr. B's rehearsal of my proposed plan of procedure, it seems, has had the effect of arousing the ire of other correspondents. Mr. Ehl, on page 219, from the somewhat vehement language used in freeing his mind on this subject, has evidently already caught a view of a huge boat-load of bees fitted up expressly to take the honey-flow *all along the river*—an expression that he does not hesitate to construe in its most literal sense.

Now I wish to say for Mr. E's benefit, that the reason why Mr. Walker cannot stay at home and make the business pay, is because a once first-class home location has of late (like the one Mr. E. speaks of leaving) become "no good for bees." This is partly because too many have been anxious to share its benefits with me (there being now some 700 colonies on the range), and partly because of terrible fires devastating the country.

No, I can assure Mr. Ehl, that I have suffered too much from other apiarists locating on my range, to willingly interfere with others in like manner—even though self-interest should fail to teach me better ; and I trust that it will be a relief to Mr. E. to learn that it is not a part of my plan to make even one stop in the whole State of Iowa—except, perhaps, to buy a few tons of honey, as is my custom each year ; and as the parties of whom I bought last year in Wisconsin, expect me to buy their crops again the coming season, I may not stop at all.

Capac, Mich.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 17.—Haldimand, at Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

May 20.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

SELECTIONS FROM OUR LETTER BOX

Afraid of Spring Dwindling.

Bees have wintered well in this section, owing to the unusually mild winter; but the spring, so far, is as severe as we are accustomed to. March was, as usual, full of cold winds; we had the heaviest fall of snow and the coldest weather during its blusters, and although we did not get "six weeks sleighing in March," we did get a little ice, and it was a *little*—not exceeding six inches in thickness. I have 51 colonies of bees in good condition out of 54 packed on the summer stands last fall. We are afraid of "spring dwindling," as the mercury continues so low (below freezing to-day), and we have so much north wind. I hope for a prosperous season.

Clarence W. Wilkins.
Cortland, N. Y., April 11, 1890.

Salt for Getting Rid of Ants.

On page 172, John H. Christie speaks of ants being very troublesome. He wishes that preserve and honey stands were made with a little cup around the stand that will hold a spoonful or so of coal-oil, so that it will keep out the ants. In my opinion, coal-oil should never be placed near honey, especially upon the same glass vessel. If you want to try such an experiment, place the preserve or honey stand in a plate with a little coal-oil in the plate, and see what the results will be.

I will give a recipe for keeping away ants—a recipe that I give to all to whom I sell honey; it should be on every honey-label. It is this: Spread a little salt on the floor or shelf before placing upon it the honey, milk, butter, lard, or any thing that ants will bother, and they will never find it. I hope that this will be of some benefit to Mr. C. and his customers, as well as to many others, for ants should never stand in the way of selling honey. Also, where ants are troublesome about the hives in early spring, a little salt will make them leave quickly. Salt will not injure honey as coal-oil would. I eat salted butter with honey, and it adds to the flavor of both. All who are subject to honey-cramp, may add a little salt to their honey while eating, and receive no bad effects from it. My bees are ready for the honey when it comes. They wintered without any loss.

J. M. Pratt.
Todd's Point, Ky., April 7, 1890.

Symptoms of Diseased Bees.

In the spring of 1882 I had the same experience as Mr. A. D. Ellingwood describes on page 220, and all of my bees were wintered on the summer stands. I do not put my bees into the cellar. In examining the combs and honey, I found that the honey and bee-bread was sour, and the honey consisting mostly of sugar-cane juice and apple cider. Mr. Ellingwood's hives might have been damp, and thus caused the honey to sour; and his bees may have spring dwindled, or had the diarrhea. My bees looked as if they were swelled, and sleek, as if they had grease poured on them; when they came out of the hives, they wanted to take their flight, and they could not fly, but hopped from the hives like grasshoppers; they would not tolerate invalids in their homes. I would like to have Mr. Ellingwood tell us the symptoms of his bees, as I am anxious to know. JULIUS J. PETTY.

Independence, Ky.

[Mr. Ellingwood is invited to reply to the above in the BEE JOURNAL.—ED.]

Experience in Bee-Keeping.

I began with 4 colonies in the spring of 1889, and got 8 swarms from them. The season was a poor one, as all the early blossoms were killed by frost on May 28, and my bees did little more than gather honey enough for brood-rearing until late, but they gathered enough for winter stores from that much-abused plant—the golden-rod. I wintered them on the summer stands, in chaff hives, and they have all come through strong. I shall increase by dividing, the coming season, as I believe that I get stronger colonies by so doing. I will, in due time, report the result of my experiments. N. L. SAULSBURY.

Batavia, N. Y., April 12, 1890.

Wet and Cold Seasons.

For the last two years—1888 and 1889—bee keeping was in east Pennsylvania merely a failure. The last two summers it was too wet and too cold, and only a small honey-flow. Last summer my bees stored nearly 200 pounds of comb honey, and the greatest part of it was from buckwheat. I have wintered 18 colonies on the summer stands, and all, so far, have wintered well. I lost 2 colonies—one by starvation, and one by being queenless. Bees are just now busy carrying in pollen on warm days, but the weather is cold and wet, and it seems very likely that bee-keeping will be a failure the coming season, but I hope for the best. I have been interested in bee-keeping for nearly 30 years, but I never saw such cold and wet weather during all summer, as it was in 1889, and nearly the same in 1888; and now it looks as though the coming summer will be the same.

P. W. FLORES.

Dillingersville, Pa., April 12, 1890.

Successful Wintering of Bees.

I have been very successful in wintering bees. I put 31 colonies (all in good condition except one that was queenless) into winter quarters last fall, packed in corn chaff from the elevator. I made a box 16 feet long, 26 inches deep, and 26 inches high at the back, and 30 inches in front, leaving the front open until the bees are in. The bottom I make of 2x6 inch pieces, nailing the floor on the underside, and fill to the top of the 2x6 pieces with chaff, and place the hives on this, side by side, packing every space between, behind and above with chaff. Before putting the bees away, I remove the combs from the upper part of the hive, and use a device to allow the bees to pass above the frames. I put about 4 to 6 inches of chaff over the bees in the upper part of the hive; I then close the front of the box, leaving about 6 inches at the entrance open, and keep this filled with straw or hay in bad weather. One box holds 9 to 11 hives. I have taken out 30 colonies (the queenless one, of course, died) in excellent condition—I think that they are the strongest that I ever saw at this time of the year. If we have dry weather this month, I will have to feed some, but if the clover yields honey, my bees will be ready for it. They have been carrying in native pollen for a week. I did fairly well with them last year, as they netted me a little over $5 per colony, above all expenses.

I would not do without the AMERICAN BEE JOURNAL even if I did not keep bees. It is always full of good common-sense.

Milo, Iowa, April 9. B. A. MANLEY.

Spray from Flying Bees.

Mr. S. J. Youngman, after some very kind words on page 250, asks about the mist or spray that he has seen fall from bees as they were returning to their hives. I have often watched for such showers, but have never yet seen them; but I have no doubt that he has. Such drops must be the excreta of the bees. They cannot come from the bees' mouths. We must remember that the sugar of nectar is dissolved in water, and can only be reduced by evaporation. This cannot take place in a closed cavity like the honey-stomach; and wonderful as the bee is, we cannot believe that she has any process by which she can separate the water from the sugar, in the stomach. She must put it into the cell, and let the heat of the hive reduce it.

While the bee is going to the hive, the nectar is being "modified" into honey; that is, the cane sugar is converted into reducible sugar, so that it can be absorbed easily without any digestion when eaten. I think that no other change occurs.

A. J. COOK.

Agricultural College, Mich.

Keeping Bees in Washington.

I am not sure that this is a good bee-countray, but I am told by persons who have lived here for years, that bees do wonderfully well here, and the honey produced is of the finest quality. I have found but few bees as yet, and I do not think that there is a single practical apiarist in this part of the land. This far-off country is a "wonderland," and is not without great advantages, and the most wonderful scenery. Blaine is situated in the northwest corner of the new State of Washington, just south of the British line, and on the east shore of Georgia Bay, of the great Puget Sound. It is a town two years old, and has a population of nearly 1,000; it is now on a wild boom, and it would be hard to find a person here that would not rather have a town lot in Blaine, than the finest apiary in America. As for myself, I would not object to having a few good lots, but I would like, also, to have a good apiary here, as honey is scarce, and brings a good price—from 20 to 25 cents per pound for comb honey. There is no extracted honey in the market. I think that is a good place for clover; I find both white and Alsike growing on every foot of ground where it has a chance, and it never winter-kills or dries out here, but there may be too much dampness and cool weather for the production of honey. I shall test the matter the coming summer, and send a report next fall.

JOHN I. MARTIN.

Blaine, Wash., April 7, 1890.

Supers and their Improvements.

Mr. Baldridge's article and quotations on page 232, incited me to one more effort by way of an improvement on what I thought was good enough. Last season I used 200 of the supers that Mr. Baldridge's correspondent refers to. True, there was some propolis at the upper corners of the sections, but the super, as a whole, was so much superior to anything that I had ever used before, that I did not consider it objectionable, but I found that I made more allowance for the T tins than was necessary, and I now have them so close fitting that there is little space left in which the bees can put propolis. The result of my effort as an improvement, I send to the BEE JOURNAL Museum to-day. It has two wooden thumb-screws on one side, and another on one end, which screw against thin boards placed between the body of the sections and the parts of the super through which the screws work. By this arrangement, the sections are held securely in place, and by loosening the screws, a single section can easily be removed; or, by reversing the whole super before unscrewing, the entire body of sections can be quickly taken out all together. The supports that I use in connection with the screws, will not sag; the sections are held absolutely close together; the super can be used with, or without, separators; any single section or row of sections can be readily removed or interchanged, or the entire super can be emptied *en masse*; and the sections are kept absolutely square, and the ends and edges free from propolis.

GEO. E. HILTON.

[The super is received and placed in our Museum, as requested. It is substantially as described by Mr. Hilton, and will no doubt prove to be useful and convenient. We can discover but little, if any, difference between this super and the one which Mr. Bull describes on page 278.—ED.]

Wintered Well—Mites on Birds.

I began the season of 1889 with 37 colonies, and took 2,500 pounds of comb honey, but lost about two weeks of the best of the honey-flow on account of shortage in sections. I increased to 70 colonies, 3 of which were queenless, they killing every queen that I attempted to introduce. The balance I put out on April 8, in good condition. Everything here has the appearance of a good season for 1890. I would like to know how to get rid of mites, or little insects, on canary birds. We bee-folks are bothered with them, and would like to know a remedy that is sure, and will not damage the birds. We get so much information from the BEE JOURNAL on bee-matters, that I venture to ask in regard to this. MRS. L. J. KEYES.

Nora Springs, Iowa, April 14, 1890.

[Perhaps some of our bird-fanciers will answer this question. We know only of simple remedies like sulphur, red-pepper, etc.—ED.]

Much Loss in Wintering.

Bees in this section of the country have not wintered well, great losses having been sustained by many—some lost every bee they had. I have, so far, only 17 colonies left out of 142, and they are weak, at that. It is claimed that the fall honey gathered from wild buckwheat, etc., contained poisonous substances, causing the bees to die with the diarrhea. STEPHEN ROESE.

Maiden Rock, Wis., April 16, 1890.

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51D26t 1m1y.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, postpaid.

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HONEY AND BEESWAX MARKET.

BOSTON, April 19.—Market is strong and well cleaned up on all fancy 1-lbs., at 16c. A small quantity of 2-lbs. on hand sells at 15c. Extracted, 8@9c. No Beeswax on hand. No off grades in any way can be sold here.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and ½ barrels, 7½@8c.; in tin and kegs, 7@8½c.; dark, in barrels and ½ barrels, 6@6½c. Beeswax, 23@26c.
A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 7.—Supply of white 1-lbs. is very limited—10,000 or 20,000 lbs. more of fancy comb in 1-lb. sections would find a market here before the new crop comes. Extracted sells very slowly. We quote: Fancy 1-lbs., white, 13c.; choice 1-lbs., 12c. Fall amber 1-lbs. and 2-lbs., 9@10c. Choice white 2-lbs., 11@12c. Extracted, white, 7c.; amber, 5@6c. No Beeswax in the market,
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demadn good.
HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, April 9.—Demand good for choice white comb honey at 12@15c.; dark is very slow sale. Extracted is in good demand at 5@8c. Stock is low.
Beeswax is in good demand at 22@25c. for good to choice yellow. C. F. MUTH & SON,
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☞ I have received the Bingham Smoker in first-class order. I have given it a fair trial, and I am well pleased with it. Accept my thanks for your prompt returns. —R. J. SWIFT, Blasdell, N. Y.

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* * *

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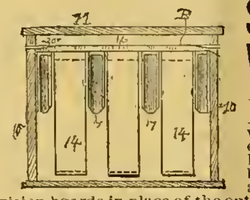

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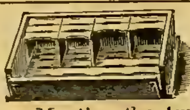

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 3, 1890. No. 18.

EDITORIAL BUZZINGS.

May Sun is bright—the air is clear,
The darting swallows soar and sing,
And from the stately elms I hear
Bluebirds and bees salute the spring.

☞ Shortly before one of the worst of landslides, at Plurs, Switzerland, on August 25, 1618, at 12 a.m., the bees left the hives.

☞ We want a Volume 2 of the AMERICAN BEE JOURNAL—July, 1866, to June, 1867. Any one having it for sale may send us a postal card, saying what he will take for it. Do not send any numbers before we order them, for we only need one set.

Bee-Keeping in Ireland is quite an important industry. Last year (1889) about 30,000 colonies of bees were kept there, which produced, in round numbers, 500,000 pounds of honey. Ulster country is the center of this growing and interesting pursuit. Verily, the "Emerald Isle" is sweet, as well as "green."

The Votes for the "National Flower of America" are very emphatically in favor of the golden-rod. Of all the votes sent to Mr. Prang, as requested, 70 per cent. are in for that golden beauty. This is another exhibition of the influence of bee-keepers, when they are properly united in creating an opinion favorable to the pursuit. It presents another proof that "in union there is strength." Now it will be presented to Congress by Mr. Prang, through some members of each body, and in all human probability the golden-rod will become "the National flower of America."

Bees and Fruit.—At the regular meeting of the Rhode Island Horticultural Society, held in Franklin Lyceum Hall on April 16, Prof. Samuel Cushman, Apiarist of the Rhode Island Agricultural Experiment Station, read an essay entitled, "The Relation of Bees to Fruit." The Providence *Journal* of April 17, 1890, gives the following as its report of the essay and the discussion following it:

> Mr. Cushman illustrated his subject by charts, and spoke for about 40 minutes. He began by saying that he was a bee-keeper, and would present views attained by personal observation.
>
> The essential and important point made by Mr. Cushman, was that bees were not injurious to growing or fair fruit, but that, on the contrary, they were beneficial to flowers and the bloom of fruit trees. In this belief he was supported by every member of the society present. Mr. Cushman referred generally to the process of development of flowers, and said that some fertilize themselves, some are fertilized by the wind, but the great bulk is fertilized by insects. The latter produce cross fertilization, a very important thing for plant life.
>
> To illustrate his position, Mr. Cushman quoted liberally from celebrated writers on the subject of self and cross fertilization. Insects and flowers are benefited alike. He explained how bees get at the nectar of flowers and, the result of their action in inoculation. He referred to the various kinds of insects that get food from flowers and fruit. The habits of flowers correspond to the habits of insects, and both are indispensable to each other.
>
> Kingston is celebrated for the variety and abundance of its flowers, and there are more bees there, than in any other section of the State. On certain islands where insects are scarce, very few flowers are found. Of all insects, bees are the most industrious, and flowers visited by them are the most attractive in every way. Insects materially aid the bloom of trees, and better fruit is obtained by reason of their visits. He said that the juice of fruit is injurious to bees, and that bees do not injure sound fruit in any way. They attack only bruised or juice-giving fruit, or fruit previously injured by other insects. Fair fruit is never harmed by them.

After the essay had been concluded, oranges and bananas were served during a short recess. When the meeting was again called to order, President E. J. Nickerson invited a discussion on the subject of the essay. L. W. Russell spoke briefly on the relation of bees to fruit, and of the important service rendered by the industrious insects. He moved a vote of thanks to Mr. Cushman for his excellent essay.

Henry T. Root said that he hoped the sense of the meeting would be taken, and if the views expressed in the essay were entertained by the members present, the society should endorse them with the vote of thanks.

T. K. Parker said: "Never destroy bees, for they are of great benefit to mankind." He also said that he had discovered another thing recently. Heretofore he was of the belief that the crocus was without seeds; he never could find any. There was a good reason why he could not, for cats eat them. The discovery was that cats are very fond of crocus seeds. In referring to bees, he said that he did not think they damaged grapes. Wasps he knew to be destructive to various kinds of fruit.

Dr. Timothy Newell said he never knew bees to injure fruit of any kind. George Hunt, J. L. Snow, and John Bowen testified to the same effect.

Action was now taken on the motions that the society endorse the statement that *bees do not injure sound fruit*, that they are *more beneficial* than harmful, and that a vote of thanks be extended to Prof. Cushman. Carried.

The above testimony of horticulturists, gleaned from the Providence *Journal*, should have great weight, and dismiss the subject at once and forever about bees being injurious to grapes. They are the fruit-growers' best friends, and should always be so regarded. As scientific light and knowledge increases, the wild ideas of ignorance and prejudice will vanish, and the bees will be honored for the important part they take in fertilizing the flowers, increasing the quantity of fruit, and gathering Nature's pure sweet—thus multiplying the pleasures of mankind, as well as adding to the material wealth of commerce.

Names of Officers.—Mr. J. W. Tefft, of Collamer, N. Y., makes these suggestions:

> I should be pleased to see the AMERICAN BEE JOURNAL adopt a plan of keeping the names of the officials of the International Bee-Association and the officials of the National Bee-Keepers' Union at the head of the Letters at all times, so that we may know who and where to address our letters. The AMERICAN BEE JOURNAL is the official bee-paper of the world, and was never so powerful and valuable as at the present day. Its teachings in apiculture are that the one who can produce the greatest crop of honey is not the best apiarist, but it is that one who can effect it with the least experience. Its pages are an instrument of civilization—a safety lamp for all bee-keepers. It gives us all the *light*, but none of the conflagration.

We can very easily accommodate our readers in that matter, and will adopt the plan mentioned, at once. It appears on page 300.

One coincidence is worthy of note: The President of each is located in Michigan, and both Secretaries are located in Illinois—for the present year.

Honey Almanac.—John Craycraft, of St. Francis, Fla., gives this testimony in regard to the importance of circulating the Honey Almanac:

> I have examined the Honey Almanac, and am well pleased with its contents. In making known the uses that honey can be put to, its circulation would certainly be a great help to the sale of honey.

☞ Jacob T. Timpe, of Grand Ledge, Mich., has mailed us a sample of his premium Italian bees. They are fine, large, yellow, and well marked; and are as lively as they are beautiful.

GLEAMS OF NEWS.

Spraying for Noxious Insects.—Much information is now in demand concerning *when*, *how*, and *what solution* to use in spraying, to kill noxious insects. The following valuable article on this subject is from the *American Agriculturist* for May, and will answer hundreds of questions in the minds of our readers, or which have been sent to this office for reply:

The spraying-machine has become a recognized part of the equipment of the successful farmer and gardener. The uses to which it can be put are being increased yearly, and the indications now are that within a few years we shall be able with it to combat successfully the great majority of insects and fungous diseases attacking field, fruit and vegetable crops. There is a great variety of spraying-machines now on the market, the majority of which do effective work. The main points of a successful outfit are that the pump shall be strong, durable and easy to work, but throw a forcible stream; that the nozzle shall project a fine spray a considerable distance, and be so constructed that the size and quality of the stream can be regulated at the will of the operator. In these days, when so many people are using or getting ready to use copper-sulphate solutions as fungicides, it is desirable that the parts of the pump touched by the spraying-fluid be made of brass, as the copper solutions corrode iron.

INSECTICIDES TO USE.

A large proportion of the insecticides now in use may be applied with the spraying-machine. The most important of these are the arsenites, Paris-green or London purple; but there are also many others, including hellebore, pyrethrum, and kerosene emulsion, which are especially effective when applied in a water spray.

PARIS GREEN is a chemical combination of arsenic and copper, containing about 55 per cent. of arsenic. It is practically insoluble in water. For spraying apples, pears, cherries of the varieties resembling Early Richmond in foliage, and the so-called foreign varieties of plums, it may be used in the proportion of one ounce to 10 gallons of water, or a quarter of a pound to a 40-gallon barrel. It may be used against a large number of insects, including the codlin-moth, plum-curculio, canker-worm, leaf-rollers, potato-beetles, and, in fact, nearly all biting insects infesting plants to which poisons may safely be applied. The Paris-green-and-water mixture must be constantly stirred, to prevent the poison settling to the bottom of the vessel.

LONDON PURPLE contains nearly the same per cent. of arsenic as Paris green. It is cheaper, and remains in suspension better, but is generally considered to be more liable to scorch foliage. It may be used in the same proportion as Paris green, and is applicable to the same trees and for the same insects.

HELLEBORE is a vegetable poison, but much less dangerous than the mineral arsenical poisons, and it kills insects both by contact and by being eaten. It may be applied in water mixture, in the proportion of 1 ounce to 3 gallons, or a pound to a barrel. It is especially valuable for destroying the imported currant-worm, the cherry-and-rose-slugs. It usually retails at about 25 cents per pound.

KEROSENE EMULSION is made by adding 2 parts of kerosene to one part of a solution made by dissolving half a pound of hard soap in one gallon of boiling water, and churning the mixture through a force-pump with a rather small nozzle until the whole forms a creamy mass which will thicken into a jelly-like substance on cooling. The soap solution should be hot when the kerosene is added, but of course, must not be near a fire. The emulsion thus made is to be diluted before using, with 9 parts of cold water. This substance destroys a large number of insects, such as the chinch-bug, cabbage-worm, and white grub, and is a comparatively cheap and effective insecticide.

PYRETHRUM is an insecticide made from the powdered flowers of plants of the genus *Pyrethrum*. There are three principal brands upon the market, known as Persian insect-powder, Dalmatian insect-powder, and Buhach, the latter being a California product. The greatest obstacle to the use of pyrethrum has been the difficulty of obtaining the pure, fresh article. If exposed to the air, the poisonous principle volatilizes, and the powder is worthless. Hence, dealers should purchase a fresh supply each season, and should keep it in air-tight vessels. Pyrethrum is used mainly either as a dry powder or in water (1 ounce to 3 gallons), but may also be used in the form of a tea, or a decoction, a fume, or an alcoholic extract diluted. For use as a dry powder it may advantageously be diluted with 6 or 8 parts of flour. It is especially excellent for clearing rooms of flies and mosquitoes, and for killing the common cabbage-worm. It is practically harmless to man and the higher animals.

CROPS TO SPRAY.

The following crops are among the more important which may advantageously be sprayed to prevent insect injury:

APPLE.—Spray for codlin-moth and curculios soon *after blossoms have fallen*, when apples are from the size of a pea to that of a hickory-nut, with London purple or Paris green, one ounce to 10 gallons of water. Repeat application in a week or 10 days.

PLUM.—Spray foreign varieties (Lombard, Green Gage, etc.) soon *after the blossoms have fallen*, with London purple or Paris green, 1 ounce to 10 gallons of water. Repeat the applications once or twice at intervals of 10 days. Varieties of the Wild Goose class are almost as tender in foliage as the peach, and should be sprayed carefully, and with a weak mixture, if at all.

CHERRY.—If cherries are generally "wormy," spray Early Richmond, and varieties similar in foliage, with London purple or Paris green (1 ounce to 10 gallons of water) soon *after the blossoms fall*. Repeat the application once or twice at intervals of a week or 10 days.

PEACH.—If sprayed at all, this fruit should be treated very carefully. Do not use London purple, but rather Paris green, seeing that it is kept constantly stirred, and do not use a solution stronger than 1 ounce to 15 gallons of water. Spray late in the afternoon, *after the blossoms have fallen*.

CABBAGE.—To destroy the cabbage-worm, spray with pyrethrum, a pound to a barrel of water, at intervals of a week or 10 days, from the time the worms appear until the crop is ready to harvest.

New Catalogues and Price-Lists for 1890 are received from—

J. B. Mason & Sons, Mechanic Falls, Me.—16 pages—Bee-Keepers' Supplies.

J. H. M. Cook, 78 Barclay St., N. Y.—4 pages—Supplies for Bee-Keepers.

Foul Brood, so-called, is reported in many places, and F. I. Sage & Son, of Wethersfield, Conn., on April 24, 1890, write as follows:

> We have read much about foul brood; still we know but little about its management. We would like to hear from some one or more as to what is the best thing to do now—this spring—to eradicate it from a yard. Will it not be better to begin operations before the bees get to breeding very much? or would it be best to make one grand pile of bees, hives and fixings, and have a grand illumination—in other words, are they worth fussing with? We would like to hear from those who have been successful in eradicating this disease from a yard.

Advice will vary by our readers; but our opinion is that when the disease has a good hold, it will not pay to "fuss" with cures. The best way is to commit the whole to the flames.

Luck.—Bees can be kept by most persons, but there are some so careless and negligent that they would have "no luck." These "bad luck" fellows cannot have a garden, for the weeds grow up and choke it; no corn, for the hogs will get in and destroy it; no wheat, for the cattle tramp it down on account of poor fences; while the bees will not succeed as well as these others, on the "let alone" plan.—*Selected.*

☞ In our notice of the loss by fire of G. B. Lewis & Co.'s factory last week, we relied upon the telegraphic reports in the daily papers, when stating that their stock of hives, sections, etc., were all destroyed. We find that they had a large stock stored in a warehouse which was not destroyed, and are very glad to make this correction.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, post-paid.

Convention Notices.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. FULLER, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The next annual meeting of the York and Cumberland Bee-Keepers' Association, will be held at Buxton Centre, Maine, on May 10, 1890, sessions at 9 a.m. and 2 p.m. An interesting programme is assured. A cordial invitation is extended to all interested to be present. C. W. COSTELLOW, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, *Sec.*

QUERIES and REPLIES.

Folding the One-Piece Sections Together.

Written for the American Bee Journal

Query 705.—1. How do you fold together one-piece sections? 2. What speed do you, or your helpers, make?—Indiana.

1. With a hammer.—Mrs. L. Harrison.

I use nailed sections.—G. M. Doolittle.

I use only four-piece sections.—R. L. Taylor.

1. By hand. 2. I do not know.—J. M. Hambaugh.

We use only the 4-piece, dovetailed, whitewood sections.—C. H. Dinbern

1. By hand. 2. "Lightning speed."—A. B. Mason.

1. I use a press. 2. I have never timed it.—A. J. Cook.

1. By dampening and carefully folding, commencing at the end. 2. I could not say. —Will M. Barnum.

1. With a wooden mallet. 2. This work is mostly done by boys; 3,000 would be a good day's work, allowing 10 hours to the day.—J. P. H. Brown.

1. I use but few one-piece sections, but the 4-piece. I have 2, and sometimes 3, boys at work putting up sections. 2. I do not remember how many they put up per hour.—H. D. Cutting.

I use so few that I require no help, and have no occasion to time myself as to speed. I use the all-in-one-piece sections, and put them together without the use of a machine.—J. E. Pond.

One of my boys has always done this work. I do not know what speed he attained. He is now away attending school, hence I cannot ask him.—Eugene Secor.

I do not use 1-piece sections. Small boys can put together from 400 to 500 4-piece sections a day. It does not pay the bee-keeper to put together sections, if he has anything else to do; but it is just fun for the boys.—G. L. Tinker.

1. Without any machinery, simply *pushing* them together with the hands. 2. My son puts together 21 in a minute to show off, and 16 a minute when doing a day's work. It takes a strong grip, however, to do this, and use no mallet.—C. C. Miller.

1. It is said that a mother-bear, teaching her son to walk, said: "The way to walk is to *walk*." I put them together in the only obvious way. To prevent them from breaking, I pour boiling water on the outside, opposite the grooves. 2. I have not used a great many, and do not know how many I could put together in a minute. I can nail 4-piece sections more rapidly than I can put the 1-piece sections together, and I prefer them.—M. Mahin.

1. My method is as follows: A sponge is used to moisten the wood; the sponge is then drawn across the back of the V-cuts; as this is done, the pieces are stacked up in front of the operator. When putting together, the piece is laid flat on a solid dressed surface, with the broad end toward the operator. The folding is done from the end pointing toward him. When the dovetailed ends are brought in position, a blow or two of the hammer finishes the job. If not too dry, the sections will fold without the sponging, but the box is much stronger if the sponge is used. 2. I do not time myself. A man, or woman either, will live longer by keeping cool both in body and mind. Do not time yourself—just work steadily on.—G. W. Demaree.

Never use 1-piece sections. I would not take them as a gift, of any manufacture. They are made of basswood, the joints are bad, liable to breakage, and, that is not the worst of it, the openings between the sections should always go clear through from side to side, and basswood is not fit to make sections of, anyway, because it soils and daubs with honey and stains so easily. White poplar is the thing, and it does not work at all on the 1-piece plan. It is not the right kind of wood, but it is just the right kind of wood for sections, every other way. I pay 50 cents per thousand for driving together, perfect and square, the 4-piece sections, dovetailed at all corners; and a small boy who is glad to earn 50 cents a day, will readily put a thousand together every eight hours.—James Heddon

Use a "press" made for that purpose. The speed of doing it varies according to the temperament and capacity of those doing the work.—The Editor.

CORRESPONDENCE.

INCREASE.

Prevention of Swarming Without Loss to the Bee-Keeper.

Written for the American Bee Journal

BY DR. C. C. MILLER.

I have received the following letter for reply, which fully explains itself:

Dear Sir:—Last fall, at the meeting of the Northwestern Bee-Keepers' Society in Chicago, we had a short conversation. In answer to my question in regard to your experiments during last season, in caging the queen for 10 days at the opening of the swarming season, you told me that the readers of bee-literature would get what you knew on the subject, before spring. Not hearing from you, I take the liberty of writing to you in regard to the matter.

The finding of some plan whereby increase can be avoided without loss to the bee-keeper, is a matter in which many are interested. What do you think of giving each colony a hatching queen-cell at the removal of the old queen? By thus doing, a colony has a new laying queen in about 10 days, but is queenless for not so long a time. With hives on scales, and otherwise, my experiments in this matter point quite conclusively to the fact, that a colony of bees, queenless or with a caged queen, but having eggs and brood left them whereby another mother can be reared, do not gather as much honey during the queenless state, as before, or after; nor do I find them doing as well with a virgin queen present, as with a fertile one. How does my decision agree with yours?

The question in my mind has been, "Does not the bee-keeper lose more dollars in the form of ungathered honey, by preventing increase, than he would expend in purchasing new hives and allowing a moderate increase?"

Bees have wintered well in this locality. A part of my colonies were put into the cellar repository in October; the remainder a month later, and all came out in apparently the same condition, with the preference, if any, for early putting away. I like the plan of wintering without the hive-bottoms. Your opinion in regard to the queen-caging operation will be most gratefully received. J. C. Wheeler.

Plano, Ills., March 31, 1890.

You say well, that "The finding of some plan whereby increase can be avoided without loss to the bee-keeper, is a matter in which many are interested." Years ago, the great *desideratum* with many was increase. Gradually the question arose, "How can we profitably prevent increase?" and this has changed in the minds of many to the inquiry, "How can we profitably prevent *swarming*?" The two questions are quite different, and to the last I have as yet seen no satisfactory answer, although it is more and more coming to the front.

My experiments in caging the queen were really to prevent swarming, although, of course, whatever prevents swarming, prevents increase. Instead of caging, I generally took away the queen and put her in a nucleus, although I do not know that it makes any material difference, so far as the old colony is concerned, whether the queen is caged, or taken away. I took the queen away before I thought the colony had got ready to swarm, destroying the queen-cells if any had been started. Within 6 or 8 days all sealed cells were again destroyed, and again within 10 or 12 days from taking the queen. This left it impossible for these bees to swarm, providing all cells were destroyed as I have stated, But it is not an easy thing to make sure that no cells are missed, and so many were actually missed in my case, that I can hardly say I am satisfied with the plan. Please remember, however, that such men as Messrs. Hetherington and Elwood are so well satisfied with the plan, that they use it, and their success outweighs my failure.

Now you will want to know whether the bees did as good work in the absence of the queen? Candidly, I do not know. Mr. Elwood claims that he finds the bees working with even more than their wonted vigor after becoming hopelessly queenless. I certainly know that in some cases I have seen bees do excellent work when they had neither queen, brood, nor queen-cell in the hive. Still, I have some lingering doubts whether bees will, in the long run, do just as good work if kept for a time queenless, as they will when a queen is present through the entire season, and no desire arises to swarm. But in this last consists the trouble—they are pretty sure to want to swarm, and this may be worse than being queenless.

Just how you would like your plan of giving a hatching queen-cell on removal of the old queen, you can only tell by trying. Bees have such a way of turning up-side down, plans that seem to have no possibility of failing. But I am afraid that you will not like the plan. I am afraid that your colonies, in most cases, will swarm, and if they do, I hardly see what you will gain. The only difference would be, that, in this case, the swarm would come off with a virgin instead of a laying queen.

So long as you have raised only the question of prevention of increase, and not prevention of swarming, let me give you a plan that I used with a good deal of satisfaction, viz:

When a swarm issues, cage the queen (her wing must be clipped, of course), and either immediately, or at any time when it suits your convenience within 2 or 3 days—possibly you might wait several days—proceed to operate as follows:

Take out of the hive every comb that by any possibility might contain a queen-cell, and put these combs in an empty hive, shaking off about half the bees, the idea being to leave on these combs just as few bees as you think can take care of the brood. Generally I took all the combs the colony had. In the old hive you must leave or put anywhere from 2 brood-combs to the hive full. These combs may be without brood, but I suspect it is better that they should contain brood, and at least part of it eggs or brood just hatched. This gives the bees a chance to rear queen-cells, and if you want any, you may count on these being good. Now put back the super and cover up the hive just as it was, and put the new hive on the top of the old one. Put the queen in this upper hive, and leave them thus for 10 or 11 days. At the end of this time lift off everything from the stand, and put on it the hive containing the queen. If in the first place you had filled it with combs, you have nothing to do now but put it on the stand without taking out a frame, otherwise you must fill it up. Put on the supers, and you are done with that colony for the season, unless it should again swarm, when you are to repeat the first treatment.

You may ask me, what about the queen-cells that were left in the hive on top? Well, you have nothing to do with them. Let them alone, and the bees will destroy them just as well as you could—in fact better, for they never miss any when they hunt for them. You see there are not enough bees in the hive to make them want to swarm, and, what is perhaps more to the point, there will be little or no honey brought into the hive for a day or two, and I think that the bees will not swarm when such is the case.

The hive taken away from below may be put in a new place as a nucleus, and in a day or two it will have a young queen, or its contents may be distributed wherever they are needed.

During the time the hive was on top, a number of bees have marked that as their location; after the upper story is taken away, these bees, when they come back from the field, will fly about confusedly, then settle in a cluster on the cover, and soon some one of them will find the entrance to the lower hive, when the whole crowd, like a flock of sheep, will march down the front of the hive to the entrance below.

Marengo, Ills.

BEE-ESCAPES.

Priority of Invention of the Latest Device.

Written for the American Bee Journal

BY JOHN S. REESE.

While bee-escapes seem to be one of the absorbing topics of the present, and knowing from experience that discussions bring such valuable devices to notice, let us have it out before we get busy.

Mr. Dibbern's article in the AMERICAN BEE JOURNAL under date of Dec. 14, 1889, certainly proves the introduction of horizontal escapes (used inside the hive), and I do not call to mind that any one has yet doubted it. His letter to me, dated Dec. 3, 1889 (11 days before his introductory), and published in *Gleanings* for Jan. 1, 1890, will also prove beyond a doubt that I was the first to write for publication the plan of placing an escape inside a hole in the honey-board. Mr. Dibbern's article and my own were brought together in *Gleanings* by my special request, so that each should have full credit. Here is the letter:

> DEAR FRIEND REESE:—Your welcome letter of yesterday, together with your model of bee-escape, is just at hand. I am much pleased with your escape, and I know it will work perfectly. In so far as there are no projections, it is perhaps an improvement on mine. Still, as all modern hives have bee-spaces, I see no objections to it on that account.
>
> Again, when used for an inner cover, yours could be covered by a piece of tin, while mine would have to be removed, unless there was a full bee-space in under the board, in which case it would be necessary only to plug up the hole, and turn it over. I presume it will require a season's experience to decide which is really the better—I admit that yours is an ingenious arrangement—something that I tried to conceive, but failed.
>
> Since writing you before, I have made a board with a center escape, and it is a beauty; still, I do not know that it is any improvement on the single-exit escape.
>
> C. H. DIBBERN.
>
> Milan, Ills., Dec. 3, 1889.

Now ought not this to settle the matter? The thickness of the board (provided it is as much as a bee-space) cuts no figure at all, neither does the outlet to the escape. The writer conceived the idea of placing the horizontal escape in the board, and flush with the top and bottom, and gave it to the readers of bee-papers, and his thoughts have ever been to make it simple, inexpensive and easy to make—one that any bee-keeper ought to make from the picture, and certainly after seeing a model. He is not in the supply business, and would like to see every one make and use them.

The models that I have been making are in a thin block, 5-16 of an inch thick, 3¾ inches wide, and 6½ inches long. This oblong, square escape (model) can be let into any thickness of honey-board, and is as readily movable as any escape ever made; but you will not want to move them.

As regards testing escapes with the robbing plan, and preventing robbing, I gave that plan as far back as two years since—no style of escape will clear a super of bees in their regular, every-day condition, as quickly, or as clean, as we would like it done, unless we induce the robbing state, then any style (not excluding the old, reliable, single, vertical cone) will clean the super so quickly that we will be surprised.

Many of us will test escapes this season, and I predict success for the horizontal kind; and the writer would like to hear from those who fail, as he thinks that he can set them right. Be sure to protect the supers from the sunshine, when the escapes are used.

Winchester, Ky., April 19, 1890.

HONEY-PLANTS.

Some Observations on Various Plants for Honey.

Written for the American Bee Journal

BY JOSHUA BULL.

I was much interested in reading Dr. C. C. Miller's remarks on the subject of "Farm land for honey alone," on page 214, and it prompted me to offer some of my observations and conclusions concerning honey-plants and their probable value. Although my experience has not been very extensive in the cultivation of plants for honey only, yet for the last five years I have been experimenting in a small way with a few varieties of plants, and from the result of those experiments I submit the following:

SPIDER-PLANT.—When all conditions are right, it will yield large quantities of very thin nectar, which can be seen in early morning amid the stamens of the flowers, but on account of the peculiar construction and openness of the blossoms, even a very gentle breeze of wind will shake the nectar all out of them in an incredibly short time; or, when the sun shines out brightly, the nectar disappears with the morning dew. The bees do not notice it through the middle of the day. Therefore, I conclude that the spider-plant is of but little value for honey, especially in localities much exposed to wind.

Cleome, or Rocky Mountain Bee-Plant.—This is a rank, thrifty-growing plant in this soil, and evidently yields considerable nectar; but the plant and flowers have a very disagreeable odor, which appears to be imparted to the honey which it produces. Two years ago I had a row of cleome growing about five rods long, and the plants branched out and formed a complete mass from 6 to 8 feet wide, the whole length of this row, and when in full bloom, it was very beautiful in appearance. Although there were more than 40 colonies of bees which had access to it, yet one colony succeeded in storing enough honey from this little patch of plants, so that the odor of the plant was plainly discernible in some of the honey in the sections, both to the smell, and to the taste. This seems to indicate that cleome, when well grown, will yield considerable quantities of honey, but not of a desirable quality for table use.

I have been watching with considerable interest for Prof. A. J. Cook's account of his experiment with cleome, which I understood he proposed to make last season; but if anything has been published concerning the result, it has escaped my notice, or else I have forgotten about it. I wish that the Professor would give us his opinion about cleome as a honey-plant.

Catnip.—This is a good honey-bearing plant, but it also has a flavor peculiar to that herb, which is imparted to the honey that it produces, but, fortunately, it is not very objectionable, and I estimate it as one of the best of honey-plants.

Melilot.—This plant is too widely and favorably known to need anything further said in its praise. Its delightful fragrance is a guarantee for the excellence of the honey which it produces, and the eagerness with which the bee visits it, is an indication of the quantity, as well as the quality of the nectar which they obtain from it; although there are times when, for some cause, they seem to pass it by almost unnoticed—but this is also the case with almost all other honey-bearing plants, shrubs and trees.

Simpson Honey-Plant.—It is perhaps one of the most valuable of any on the list of plants to be grown for "honey alone" in this locality. It is a rank, thrifty-growing perennial; grows readily from the seed, and, when once started, will crowd everything else out so far as it is allowed to spread. The variety which I have (I think that it is called "early or dwarf") grows about 8 feet high, and branches out like a small tree. It commences to bloom in July, and continues in bloom until severe frost stops its growth—usually in September or October, in this locality.

When this plant is in bloom, and the weather is such as to admit of it, the bees literally swarm over it from the early dawning of the morning until the shades of evening fall. Hive-bees, bumble-bees, yellow-jackets, hornets, and other species of honey-loving insects hover around it and keep up a roaring equal to a large swarm on the wing, which can be heard several rods distant.

I have never been able to form any definite opinion as to the flavor of the honey from this plant, but if the eagerness manifested by all kinds of bees and other insects to get some of it, is any criterion to judge by, then the quality must be excellent, and the quantity considerable. I have had a little patch of this (perhaps equal to about one square rod) growing for the the last 5 or 6 years, and have many times noticed that all wild bees—such as yellow-jackets, hornets, etc.—have a great preference for this plant; apparently, they will not notice any other kind of flowers in its vicinity, therefore the hive-bees stand a poor chance to get much from so small a stand of plants.

I have sometimes watched the bees working on the Simpson honey-plant, to see how often each blossom would be visited; and I calculated that every open blossom was examined by one or more bees as often as once every minute, on an average, throughout the whole of each and every fine day. Of course they could not get much each time when visited so often, but still they would get enough to keep them hanging around, rather than to go somewhere else to look for honey.

Another important feature about it is, that whatever dearth of nectar there may be from other sources, I have never known the bees to desert the Simpson honey-plant, when it was in bloom, and the weather suitable for bees to work.

Now, with the little knowledge I have of this matter, and the impressions received by observations made from the foregoing trifling and comparatively insignificant experiments, I am ready to believe that it will "pay to occupy farm land for honey alone"—provided that care is taken to select plants well suited to the soil and location, and that we do not have to pasture too many of other people's bees. My first choice of plants for such purpose in this place, would be the Simpson honey-plant; second choice, melilot—but the latter does not seem to "catch" well when sown broadcast on soil here. I have tried twice to seed half an acre, by sowing it with grain crops, the same as other clovers, but for some cause it mostly failed to grow.

Golden-Rod.—That "Many men have many minds," is, I think, verified by the many different opinions which have lately been expressed through the columns of the American Bee Journal concerning golden-rod as a honey-plant; and perhaps to some extent they may all be correct, under certain conditions, so far as the plant itself is concerned; but I think that some of them are mistaken in regard to the character of the honey which it produces, if not in the quantity.

In this part of the country, golden-rod is a *good* honey-plant, when all the conditions are right, but it needs an abundance of rain to keep the ground moist when it is in bloom, to enable it to secrete nectar freely. For example, last August, when golden-rod first began to bloom, the weather was very dry, and the bees paid no attention to it until about Aug. 20, when we had a heavy fall of rain which soaked the ground, and for 3 or 4 days after the rain, the bees were all excited over the golden-rod—7 or 8 bees would sometimes be working on the same flower, all at once; but after a week or so of dry weather, they seemed not to notice it any more.

Golden-rod honey, when free from admixture with any other kind of honey, is of a peculiarly bright-straw color, rather thin in texture, and has a flavor, when first gathered, decidedly resembling a weak decoction of the plant, and it is as little inclined to granulate as any other honey with which I am acquainted. I have had it remain liquid a year or more, but it is not often that we can get it free from mixture with other honey, because boneset, wild celandine, wild asters, etc., all bloom about the same time with golden-rod. Honey from wild asters will granulate in a very short time, whether in the comb or out of it.

Aster honey, when free from admixture, is very white—I think that it is as white as linden honey, and, when first gathered, it has a sort of spicy flavor, which is very pleasant to the taste; but when it granulates, it loses that spiciness. I send to the Editor a sample of it, and would like his opinion in regard to its quality, and probable market value. The sample which I send probably is not entirely free from admixture with honey from some other autumn flowers, yet it has enough of the aster honey to make it candy quickly.

Seymour, Wis.

[The two one-pound sections of honey came to hand in due time. The capping was peculiarly white, and made a very attractive appearance, but the honey was granulated solid, making it of no market value as comb honey.

The flavor is quite pleasant to the taste, but honey which granulates quickly should always be extracted as soon as possible, to make it available for manufacturing purposes; for such use the flavor is not taken into account, and if any of its "spiciness" be lost in granulating, it will not affect its market value.

This honey is evidently a mixture from fall flowers, including the asters.

Of all the honey gathered in the fall, that from sweet clover (*Melilotus alba*) is the most pleasant to the taste, and it yields plentifully until after the frosts come.—Ed.]

OHIO.

Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal

BY MISS DEMA BENNETT.

The afternoon session of the first day was called to order by Pres. H. R. Boardman, and opened by an enjoyable song by Drs. Miller and Mason.

REVERSING THE COMBS.

Mr. Chalon Fowls, of Oberlin, then read an essay on "Reversing." He had 2 illustrations showing the appearance of the brood in the comb, before and after reversing.

Mr. E. R. Root exhibited a sample of casting for the ends of the frames, to be used in reversing the frames. He said that he had but little experience in reversing, but would like to have the matter discussed. Reversing will cause the bees to build the combs more firmly in the frame, and do not need wiring—some do not wire the frames.

F. A. Eaton—What is the use of reversing?

Mr. Fowls—It will, if rightly done, enable the operator to secure the whole crop of white honey in the sections, and the bees will also more readily enter the sections.

S. F. Newman—If reversing helps to get honey, do it; if not, then do not practice it. It costs time and money.

He could not see that reversing would help any, and if the only object is to get the bees into the sections, it would not pay, as he never had any trouble to get them into supers. If reversing would get the bees ready for the harvest, it might pay. The main thing is to get the colonies strong. During fruit-bloom he puts 2 or 3 brood-combs in each hive, from which he extracts the honey just as white clover comes into bloom. At this time, he puts on the sections, and never has any trouble to get the bees to go into the sections in the old colonies, or to get honey, if there is any in the blossoms to gather. If, at this time, the bees swarm, he hives the new swarm on 5 or 6 frames, using only empty frames with a strip of foundation—just enough to make the bees build straight combs.

Daniel White, would not trouble to reverse the combs.

Geo. Spitler asked Mr. Fowls if he did not have too many bees by reversing?

Mr. Fowls—I do not think that it prevents swarming, but I do think that it discourages swarming.

N. T. Phelps, has reversed combs some. His experience is that he gets no more brood, but gets it concentrated, and he secures just as much honey in the brood-nest, besides getting better combs, than with the non-reversing frames.

Few of those present had practiced reversing.

EXTRACTING AND EXTRACTORS.

The next essay was by Dr. A. B. Mason—"Extracting; which are most expeditious, reversing or non-reversing machines?" He read extracts from reports of those who had used the reversible extractor, and who spoke in praise of its merits.

It was claimed that the reversible extractor was easier on the combs, on account of its larger circumference. A. I. Root called it a "man-killer."

Dr. Miller said that the reversible machine must be large. I think that the small one beats the large one "all hollow."

O. J. Post has one, but the poor honey seasons of the last 2 or 3 years have not given him the opportunity to test it as he would like.

A question was raised as to which was the hardest to operate, but it was not decided.

Mr. Phelps—You have to turn harder to get it started, but after it is started, it does not take any more power to turn it.

Mr. J. F. Moore said that he thought that most of the large honey-producers in California used the reversible extractor.

BASSWOOD—THE BEE-BUSINESS.

A recess of 10 minutes was then taken, which was followed by Pres. H. R. Boardman's address, on "A brief glance at past and future bee-keeping." Pres. Boardman referred to the great destruction of basswood, but Mr. A. I. Root does not think that this is all the reason why the honey crop seems to be getting smaller and smaller each year. There are, perhaps, many reasons for the failure. He believes that it would pay to plant basswood trees for honey. He told of a man who cut down his basswood, and sold it to him for sections a few years ago, and from the sprouts around the stumps, timber is again large enough to make into sections.

Dr. Miller said that there is always something to encourage the bee-keeper—it is a hopeful business. In 1882 he had 16,849 pounds of honey; the years following, he had less and less, until in 1887 he had to feed his bees 2,800 pounds of sugar to keep them alive. In 1889, he had 12,000 pounds of honey, and now perhaps it will be getting better. There is no basswood in his locality.

Mr. C. A. Camp said that he was present at a convention in Cleveland 19 years ago, when Capt. Hetherington reported that he had sold honey so that it yielded an enormous revenue, and that had induced him, as well as many others, to go into the bee-business, and most of them failed. He advised young men to be careful about going into the business, and does not think it is best for bee-keepers to speak only of their success, at conventions, but they should also recount their failures, so that we should have both sides of the story.

S. F. Newman said that the bee-business was a hopeful one. There was not a year in the last 15 but that the bees had paid their way. It is "hopeful," because he hopes for a good year the coming summer.

Several communications were read by the Secretary, announcing the result of "Prang's National Flower" campaign, which gave 70 per cent. of all votes cast, for Golden-Rod; words of greeting from Prof. A. J. Cook, C. P. Dadant, and R. F. Holtermann, the two latter expressing the hope that we would affiliate with the International; also one from Anna L. Cowan, the daughter of Rev. L. L. Langstroth, saying that her father was in very feeble health, but that she could not relinquish the hope that there might yet be days of health and enjoyment in store for him. She said:

"He desires me to say that were he able, it would give him great pleasure to meet with the Ohio convention, that he might look upon the faces of his bee-keeping friends, and give them a kindly clasp of the hand. He desires to be kindly remembered to them all, and wishes you a pleasant and helpful meeting, and to all a prosperous and happy year."

On motion, it was unanimously carried that the Secretary be instructed to convey to Father Langstroth, our sympathy in his affliction, and hope that he will regain his health so as to be with us at our next meeting.

THE QUESTION-BOX.

Is it best to hive swarms on frames filled with comb foundation, or on empty frames?

The majority were in favor of using comb foundation.

Is it advisable to put in full size, or only partly fill sections with foundation?

A large majority—nearly 3 to 1—would fill the section with foundation.

Is it advisable to encourage those about us to embark in bee-keeping?

Dr. Miller said that it might be, if the ground was not already fully occupied; if it was, he would advise all to stay off the field. The President said that there was room for all—let them try it. A. I. Root advised no one to go into bee-keeping, but if any person wanted to go into the business, he would do all he could for them by giving advice, etc.; but it is essential that they "go slow"—commence with a few swarms, so as to learn the business as they go.

Toledo was chosen as the place for holding the next meeting. Officers for the ensuing year were chosen as follows:

President, Dr. A. B. Mason, of Auburndale; Vice-President, S. F. Newman, of Norwalk; and Secretary and Treasurer, Miss Dema Bennett, of Bedford.

The convention then adjourned until 7 p m.

EVENING SESSION.

The convention was called to order at 7 o'clock, with Pres. Boardman in the chair. Dr. Miller sang a song entitled, "Higher than I," after which the question-box was opened.

FASTENING BEES IN HIVES.

Is it advisable to fasten bees into the hive in cellar-wintering?

A. I. Root said that at one time he had fastened bees into the hive, but they had plenty of air. They did well. He would not shut them in, if tight bottom-boards were used.

Dr. Miller would not shut the bees in, because bees would die in the hive, and so become filthy, which would not be if the hive is left open, as the dead bees would be dragged out. He would rather have dead bees on the cellar-floor than in the hive, because they could then be swept up. He thought that no bees but those which were about to die would leave the hive. They would also be uneasy if shut in the hive.

A. I. Root said that at one time he picked up a lot of bees which had left the hive and were chilled, and after warming them up, he used them to strengthen a weak colony, which did well.

The President said that this was an important question. Mr. Root's report might induce a young bee-keeper to do the wrong thing. Bees will not tolerate anything in their hives which is not clean. If hives are shut up tight, they cannot remove the dead bees. By shutting them in, we break one of their laws. He knew of a man that bought 40 or 50 colonies, put them into a cellar in closed hives, and all died. If they would remain quiet, they might come out all right; but if they were to become uneasy when the weather was a little too warm, the combs might be melted down. Shutting the bees in the hive produces an abnormal condition. With plenty of room below, the conditions would be bettered.

N. T. Phelps related how a man had fastened his bees at the top and bottom of the hive with wire-screens, and they all died in April.

Dr. Tinker thought that with wire-cloth they might be successfully wintered.

Quite a merriment was caused by the question, "Who is the best bee-keeper in Ohio?"

"What is the best remedy for bee-stings?" provoked quite a discussion, and many remedies were given. Dr. Mason said that any essential oils, such as oil of cinnamon, cloves, peppermint, etc., was good. Have them on hand, and if visitors are stung, apply at once. In bad cases, call a physician. Some recommended cold water as the best remedy, and other remedies were also suggested, such as Pond's extract, etc.

H. F. Moore read a very interesting essay on marketing honey.

Dr. Mason read a letter relating to a sample of what was bought in Cleveland as honey. Proper resolutions were passed, and committees appointed to investigate the matter.

H. F. Moore exhibited samples of honey in packages, both comb and extracted. He sold to one druggist 68 quart-cans; to another 60 pounds. They prepare it in small packages.

After a recess, "Spring-time Joys" was sung by Dr. Miller.

PRODUCTION OF COMB HONEY.

N. T. Phelps, of Kingsville, made a few remarks of much interest on the production and marketing of comb honey. He winters his bees on the summer stands and practices several methods. The important thing is to know your locality—when honey-producing flowers bloom—and have the bees ready to take the honey. He always keeps a record of the time when the different honey-plants bloom. He takes brood from the weak colonies to strengthen those that are stronger, as weak colonies would not store any honey. He uses mostly wide frames in the production of comb honey. His hardest work is to control swarming, which he tries to do until basswood blooms, when, if they swarm, he puts them back and takes out queen-cells, when they are not likely to swarm again.

He uses small wide-frames, holding 3 sections apiece, using wood separators 3½ inches wide, made of basswood. He thinks the comb honey is whiter for using wood, and claims that a person, even if inexperienced, could pick out the honey which had been produced with tin or wood separators. Wood is far cheaper than tin. He cannot get honey in good shape to crate for market without separators; has used a few T supers; controls swarming by cutting out queen-cells and drone-brood, and by expanding the brood-nest; contracts the brood-nests after the bees have swarmed, and uses wide frames because he can the better grade the surplus according to size of colony. About one-third will swarm.

SHIPPING COMB HONEY.

Dr. Miller explained how he packed his honey into a car, and it carried in fine condition to Pittsburg.

The President told how he had bought honey, which was shipped to him over 500 miles, and was badly broken. He thinks that if there had been a separator between the sections as when on the hive, it would have carried all right.

Dr. Besse said that during the Centennial at New Orleans, he shipped to that city 2,000 pounds; put sections lengthwise of the cars, and it went through in fine condition. He took at the same time, the same amount of extracted honey in bottles, and did not break a bottle. Some of the frames in his hives of bees were broken.

Dr. Miller would not ship a section if the top and bottom were not well fastened into the sections. To have them well fastened, put a strip of foundation at the top and bottom.

H. F. Moore would ship in a 2-tier crate holding 24 sections. Mr. Phelps shipped 120 pounds in sections to a point 180 miles south-west of Denver, Colo., and not a pound was broken.

The convention then adjourned to meet at 9 o'clock a.m., the next day.

SECOND DAY—MORNING.

The first session of the second day opened with a song by Dr. Miller, followed by an essay by S. F. Newman, on "Bee-Forage," which was fine, and led to the following discussion:

SWEET CLOVER AND OTHER PLANTS.

Mr. Newman said that he did not believe the tulip (poplar) tree was appreciated as it should be. He had seen it so thick with honey that when he took blossoms of it to his children, they were delighted to extract the honey from them.

Dr. Miller said sweet clover will grow in out-of-the-way places; had sown as much as 20 acres, but it would not grow under cultivation, for him.

Mr. Newman has no faith in sweet clover for honey.

President Boardman asked if any person present had ever known of a large crop of honey being gathered from sweet clover? Mr. Newman had not; J. F. Moore had known of a decided sweet-clover flavor in the honey.

The question was asked, "What is the quality of sweet clover honey?" A. I. Root said that experiments showed that in order to know the quality of any kind of honey, a large area of plants of a kind is required. Bees consume so much honey in brood-rearing that it is hard to get any one kind of honey. At Ogden, Utah, he had seen large areas of sweet clover upon which the bees did splendidly. The honey was as nice and of as fine a flavor as any he ever saw. He had an idea that 100 colonies would want 100 acres of sweet clover, to do much good.

Mr. White had tasted sweet clover honey that was very fine. H. F. Moore said that some claimed it a bad weed. F. A. Eaton said there were acres of it on one side of Toledo. He thought that sweet clover honey was disagreeable to the taste. Dr. Mason thought that perhaps Mr. Eaton did not know that the honey was pure sweet clover; it was hard to tell. He had at one time about 70 pounds which was nice, and he thought it was sweet clover honey.

Dr. Miller thought as locality had so much to do with it, perhaps sweet clover blossoms might secrete honey in the West, and not in the East. He said that the bloom of sweet clover extends beyond that of white clover—blooms forever.

A general discussion followed as to the feasibility of sowing or planting for honey alone. The opinion seemed to be that it would not pay. Alsike clover was generally called a good honey-plant, and well liked for hay.

Dr. Miller thought that the production of honey might be increased by inducing nurserymen to plant and sell basswood trees to those who wish to plant shade-trees. He had at different times planted for others, and got others to plant basswood, he furnishing the trees himself. He reported how some one had cut down a basswood and planted a *linden*, thinking it another kind of tree. He also thought it might pay to plant sweet and Alsike clover. He thought that cattle could be induced to eat sweet clover, and if it could be made a forage plant it would pay, as it yields honey.

President Boardman said that cattle will, under some circumstances, eat sweet clover. Most of those present had not much faith in sweet clover as a honey or forage plant, though some knew it to produce lots of honey. Some claimed it as a weed. The President said that it was not, as it would not spread.

Mr. A. I. Root thinks that alfalfa may yet prove valuable as a honey-plant in Ohio, as it had in Colorado and other places in the West.

WATER FOR THE BEES.

Dr. Miller said that bees need lots of water. He uses crocks filled with water, and puts in wooden floats. The bees take the water from the wood, and none are drowned.

Mr. Newman uses rotten wood on the water. Dr. Besse uses a trough 10 feet long and 4 inches deep, which holds 5 pails of water. Bees had emptied the trough twice in one day. He puts a handful of salt in the trough once a week. He had a colony which gained 40 pounds in 6 days from fruit blossoms; it was strongly flavored with cherry.

The committee to prepare a Constitution and By-Lays for the association, consisting of E. R. Root, H. F. Moore, and Miss Dema Bennett, were called upon for a report, when Dr. A. B. Mason moved that we adopt the Constitution and By-Laws as prepared by the committee, and trust to their judgment, without taking time to have it read and debated upon. The motion was carried unanimously.

Dr. A. B. Mason (committee on Resolutions) reported as follows:

RESOLVED, That in the publication of the Honey Almanac, by Thomas G. Newman, of Chicago, we have something "new under the sun," and of real merit, and would recommend a generous distribution of them, as a means of increasing the demand for honey, in the home market.

RESOLVED, That the thanks of this Association are due, and are hereby tendered, to the railroads of the State, for their kindly giving us reduced rates of fare; to Hotel, Cleveland papers, and to the City Council; to Dr. C. C. Miller, of Marengo, Ills., who has favored us with his presence, and with his inimitable rendering of bee-keepers' songs, which have enlivened our sessions, and for his hearty interest and work during our meeting, we cordially extend our most sincere thanks.

The report was unanimously adopted; also, a motion that this Association affiliate with the "International Bee-Association."

J. B. Hains then read an essay on "Out Apiaries."

Mr. S. F. Newman has 2 out-apiaries, one of which he runs for extracted honey, the other for comb honey; he allows strong colonies to swarm. As soon as white clover blooms, he puts the supers on; does not extract until the season is over; puts an empty story over the colony, raising the filled super on the top, and gets better honey in this way. The comb honey apiary he visits often; has 70 colonies in the extracting apiary, and 50 where he runs for comb honey. Generally he gets some buckwheat bloom, but extracts before this.

F. A. Eaton read an essay on "Cellar-Wintering of Bees."

President Boardman, who is one of the most extensive bee-keepers in the State, leaves the bottom-boards on the summer stands, and winters the bees without them; he tries to put them in when the temperature is falling; the cellar should be kept dark, with a temperature about 45°; and the bees should not be removed from the cellar to the open air when the temperature outside is high.

F. A. Eaton places blocks under each corner of the hive, for ventilation.

Dr. Miller considers loose bottom-boards and blocks superfluous. The temperature should not be over 50°. He had, at one time, when his cellar was full of hives, raised the temperature to 72°, and the bees showed no visible uneasiness. He then opened the windows, and the next morning the bees were more quiet than they had been for some time.

Dr. Mason thinks that 45° is the right temperature, and said that where he can keep vegetables in a cellar, there he can keep bees.

S. F. Newman put his bees into the cellar last September, had looked at them in November, and did not expect to see them again until spring. He would not give any one a dollar to insure them as being all right.

N. T. Phelps thinks that there are large exaggerations in regard to consumption of stores in wintering. His bees do not consume as much as other people's bees do, as they tell it. He thinks that a cellar or cave for wintering bees is much the cheapest.

E. R. Root, who was to read an essay on "Out-Door Wintering of Bees," asked to be excused, owing to the lateness of the hour.

A. Webster said that any one passing his place would see three hives on top of his house; they have been there for three years, and no colonies in the apiary have wintered better.

A vote was taken, showing that about two-thirds of those present wintered their bees out-doors.

In answer to a question, Dr. Mason said that ammonia in water will remove propolis from the hands.

The Convention then adjourned till 1:30 p.m.

THE AFTERNOON SESSION opened with a song by Dr. Miller, who was unanimously elected an honorary member of the Association; also Geo. Spitler, of Mosiertown, Pa., who has kindly assisted in preparing this report of the Convention.

E. R. Root then read an essay on "Thick Top-Bars and Honey-Boards."

A. I. Root remarked that Father Langstroth used thick top-bars 25 years ago—the modern device was only an improvement, because the combs are at fixed distances. He does not, as yet, know which is best.

President Boardman said that since using the thick top-bars, he had not been troubled with burr-combs.

In answer to the question, "How many use honey-boards?" it was shown that only 9 of those present use them.

Dr. Miller said that he had learned to do away with honey-boards.

President Boardman thinks that wide frames are the most perfect, because the sections are better protected from propolis.

Dr. Miller has less cleaning with the **T** super, than with any other method that he has tried.

C. A. Graves uses the **T** super, and a top-bar scant ⅜ of an inch.

Dr. G. L. Tinker then read an essay, entitled, "Perforated Zinc for Queen-Rearing." He was kept busy answering questions for quite awhile.

C. A. Graves, chairman of the committee on Exhibits, reported that all of the articles on exhibition were favorably mentioned in their report.

Mr. S. F. Newman, chairman of the committee on statistics, reported for the convention as follows: Number of colonies in the fall of 1888, 3,524; number in the spring of 1889, 3,265; and number in the fall of 1889, 4,067. Number of pounds of comb honey in 1889, 46,099; number of pounds of extracted honey in 1889, 27,145; number of pounds of beeswax in 1889, 756. The average yield of honey was about 22 pounds per colony, spring count.

Dr. G. L. Tinker, of New Philadelphia, Daniel White, of New London, and O. S. Terrell, of North Ridgeville, were appointed delegates to the International Convention, at Keokuk, Iowa.

An essay by Miss Dema Bennett, (Secretary), on "Queen Rearing and Shipping," was last on the programme.

The Convention then adjourned to meet at Toledo, Ohio, at the call of the Executive Committee.

LESSONS OF THE CONVENTION.

Those who have attended previous Ohio bee-conventions, seem to be well pleased with both the attendance and interest taken at this meeting; but there is one thing that I noticed—too many of them took a silent interest. Several bee-keepers, who have from 75 up to 200 colonies, and must have had experience in some of the subjects brought up, said never a word. I, for one, would be glad to see this order of things changed, but how can it be brought about?

How would it do to divide the convention into classes for each topic, thus? One class to be composed of those who have had experience, and the other those who were interested, but have not had the experience, who should be free to ask questions of the other side—1 question only—until the last class had been "clear around," when, if the time devoted to the topic was not all taken up, they could ask questions around again, or the first class could each, in turn, speak on the question a stipulated time, until all had spoken. It is surprising how much can be crowded into a short space of time in an "experience meeting" where all are interested.

In some such way we would become better acquainted with each other; and, I believe in "The greatest good, to the greatest number." This would relieve the President of embarrassment, which proceeds from not knowing the names of members, and naturally enough calls on those he does know, rather than to risk putting the right man on the wrong subject. (I hope that Pres. Mason will appreciate my consideration for his bashfulness).

To say that we were greatly indebted to Dr. Miller for inspiring the convention with his kindly presence and cheering voice, is needless to those who know that the Doctor is a "host in himself," and we sincerely hope that now he is one of us, we shall meet him again in the Buckeye State.

I wish to put this Association on record as having disposed of all the topics on the programme, by the reading of an essay, followed by discussion, excepting a talk by Mr. A. I. Root, and the absence of 1 person; but the topic was taken up in its regular time, and the convention closed promptly on time on the last day.

DEMA BENNETT, *Sec.*

[The many interesting essays read at the above Convention will appear in the BEE JOURNAL, as we may be able to find place for them.—ED.]

BEES IN SPRING.

The Early Spring Management of Bees.

Written for the Michigan Farmer

BY GEO. E. HILTON.

The time of year is upon us again, when the bees should be watched closely, to see that they do not get out of stores. Look over the colonies closely, and be sure that they have an abundance. You may find some colonies that have more than they need, while the next may be on the point of starvation; these may be equalized, but be sure that you do not rob the plenteous one, for one good colony is worth more than two weak ones, and plenty of stores at this time of year, means plenty of bees in time to gather the first flow of nectar.

The instinct of the bee must approach the ability to reason more closely than is common in the insect kingdom, for as soon as their stores begin to grow short, and no honey in the fields, the production of eggs lessens in proportion. So you see it is very poor economy to stint the bees, with the thought that if you can keep them along until honey begins to come in, they will be all right. The bees may get along very well, but their keeper (if he deserves the name), will come out at the "small end of the horn." I have often said that if we could have our colonies strong when the hard maple blooms, as they are when the basswood blooms, we should get as much honey from the former as the latter.

I once secured 200 pounds from the raspberry and blackberry bloom before the white clover bloomed; that season my colonies were very strong early, and while I did not get any surplus from the maple bloom, the bees gathered large quantities, and fitted the brood-nest in the best possible shape for the berry bloom. I could have extracted considerable from the brood-nest, but it would have meant just that much less berry-bloom honey in the sections.

I speak of all this to show how necessary it is to have plenty of stores in the brood-nest during the next 30 days.

A noted bee-keeper of this State once told me that he would just as soon have 5 pounds of honey in the hive on May 1, as more. But I will venture the assertion that I can take a colony with the same numerical strength, having 15 pounds of honey, as one having 5 pounds, the first of May, and take 20 pounds more surplus from it during the season, and leave each the same number of pounds to winter on.

Of course, my advice is to make all this preparation the previous season, but if, as some colonies do, they use up so much during the winter that they are short at this time of year, by all means feed them. Feed honey, if you have it; if not, make a syrup of sugar, just as you do for table use. I once fed quite a quantity of maple syrup, and it answered very nicely for breeding purposes.

In feeding, if you have hives with tight bottoms, just raise the front end of the hive about 2 inches, and pour the food in it at the rear end of the frames while quite warm. I prefer to do this just toward evening; it will all be cleaned up before morning, and there is no danger of robbing. Don't open the hives or handle the frames more than necessary, at this time of year, and keep the bees tucked up as warm as possible.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 10.—York and Cumberland, at Buxton Ctr., Me.
C. W. Costellow, Sec., Waterboro, Me.

May 17.—Haldimand, at Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

May 20.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM
OUR LETTER BOX

Not so Cold—Wintered Finely.

Yea, verily, it will not do to combine pleasure with letter-writing, especially if one is pressed for time, as was the case when I prepared the article on "Wintering Bees," which was published on page 264. The type-writer operator, among other mistakes made, caused me to say that the thermometer at one time last winter, registered 60 degrees below zero. Now be it known that it never has been that low in any portion of Nebraska; I should have said 23 degrees below zero. Since writing the article referred to above, I have taken the bees from the cellar, and find that every colony is in fine condition, and breeding rapidly. A. C. Tyrrel.

Madison, Nebr., April 19, 1890.

Bees are at Work.

My bees have been at work for some time. Last fall I put 5 colonies into winter quarters, and this spring I have taken only 3 out alive—the other 2 have gone to the "happy hunting-grounds." I intend to build large hives this year, and let only one swarm issue from the hive of each colony. O. R. Hawkins.

Bellport, N. Y.

Painting Hives—Wintered Well.

As the subject of painted and unpainted hives is being discussed, I would say that I paint all of my hives white, and never use any shade, and have no trouble about combs melting down; but last season I made some hives that I did not paint, and in nearly every one the combs melted down. I had 5 colonies in unpainted hives, and there was not one of them that came through in good condition. I like my hives painted on the inside as well as outside—it pays.

The weather so far has not been very good for bees, but they have been working for the last few days on box-elder, and seem to be in pretty good condition. All the 235 colonies that I put into the cellar wintered well, except 2 that were queenless. I notice that one writer who has less than 50 colonies, wants to know who can beat him. I think that I can do nearly as well with more bees. Three years ago I had 100 colonies, and had no loss; 2 years ago 140, and no loss; and 235 last year, with only 2 lost, and if I would have had time to look them over last fall, I would not have lost those, for I would have doubled them up with some others. They came out far ahead of my expectations for not being looked over at all in the fall. As I had to build a new house very late, I had no time to attend to the bees.

N. Staininger.

Tipton, Iowa, April 22, 1890.

Bees Wintered Very Well.

My bees have wintered very well. I never saw so much honey in the hives at this time of the year. J. L. Way.

South Newbury, O., April 19, 1890.

Flattering Prospects—No Losses.

The prospects for a good honey crop in this locality are very flattering. Nothing but unfavorable weather will prevent it. There are no winter losses here; in fact, colonies wintered with the surplus on, did well. R. B. Woodward, M. D.

Somerset, O., April 23, 1890.

Bees Wintered in Fine Condition

Bees have generally wintered in fine condition; those out-doors, packed in chaff, shavings, etc., are especially fine. Those wintered in the cellar, I expected to lose, as they were very uneasy. My 38 colonies all wintered, but one is queenless. Bees cannot help but boom, this census year. White clover looks promising. Honey is all used up. Geo. Spitler.

Mosiertown, Pa., April 22, 1890.

Bees in Weak Condition.

Bees here are in a very weak condition, as the loss was very heavy in bees, in the cellar, although the loss in colonies was only about 5 per cent. The weather has been warm and very dry thus far, and if it does not rain soon, the outlook will not be very encouraging. The soil was in excellent condition for spring work, and farmers have seeding mostly finished.

Wm. Enke.

Rochester, Minn., April 23, 1890.

The Prospects in Florida.

To-day we are about where we were 8 weeks ago—with not as much honey in the hives, but more bees. The orange trees were beginning to bloom; the frost then cut them off, and killed nearly all the bloom and buds, as well as much of the young growth. The second growth is put out again and is full of bloom, and we hope that we will have some orange honey yet, but it will be mixed with the wild grape. Our honey season will be shorter than usual. The palmetto will soon be in bloom also, but much of it was killed by the frost, or so damaged that the bloom will be later, and not so plentiful. The button-ball was killed back a great deal, but the second growth is coming out finely, and will be very abundant. I think that it lost nearly all the summer months.

Our prospects for a fall flow of honey is not very promising, but we are not discouraged in the least, and believe that along the upper St. Johns river is one of the best locations in the State, or in almost any other State. There are only a few days in the year that bees cannot gather their support—there are very few that take any care of their bees with the care that they deserve and require for a profit. Successful bee-keeping can only be done by specialists who have no other occupations that may cause the bees to be neglected a single day. Strict attention and skill in their care with a manipulation of each colony as to its needs, are the only certain road to success. To know every colony requires the closest observation, with no putting off until to-morrow.

John Craycraft.

St. Francis, Fla., April 19, 1890.

White Clover a Perfect Mat.

Bees in this county have wintered very well—mostly on the summer stands. I think that the loss will not be more than 5 per cent. of all good colonies in the fall; the reason is that almost all had good clover honey in the brood-combs. Bees are doing nicely now on fruit bloom and maple buds. I think they are gathering honey from the apple, and if the weather continues as favorable as it is now, a week more, or until all of the apple-trees are in bloom, there will be some swarms. The weather is fine now, and everything bids fair for a good honey year. The white clover is a perfect mat all over the ground—it has a good foothold here in Kansas.

Hiram J. Ward.

Farmington, Kans., April 21, 1890.

Gathering Pollen and Honey.

I put 42 colonies of bees into the cellar last fall, and put out 42 this spring, but one swarmed out, and two were light and queenless, which I put with another weak one, leaving me now 39. All are carrying in pollen and honey from willow and poplars. We are having nice spring weather, wheat is about all sowed, and some people are making garden. I have 50 acres of land, 30 of it being heavy timber, with a good many basswood and box-elder trees, and hard and soft maple.

Geo. H. Auringer.

Bonniwell's Mills, Minn., April 23, 1890.

Getting Ready for the Season.

We are having splendid weather now—11 days without rain. Pollen is coming in plentifully, and some honey. Everything looks like a good season with the bees. We are getting our apiary into shape, and expect to have drones flying from our best imported colony in 2 or 3 weeks. We shall run 300 of our nuclei hives with small section-frames; many of the small combs are filled with brood in all stages, ready to be broken up at any time.

Our method of forming nuclei that will stay where they are put, is very simple: Six of the small hives will just fit on top of a full colony, and we can get a few queens mated there before breaking-up time comes; then all we have to do is to lift them off and start a new lot, by lifting hatching brood up in small combs from the brood-combs below, and placing screen-cloth between; put in 2 combs of honey and a queen-cell, and in a few days they will be ready to come off.

In this way, we can get all the working nuclei we need, without the usual bother of bees going back. They sometimes swarm out as soon as they get their liberty, but the queens are held by nectar, and they return all right. The next day we put in a comb of brood, and the queen is allowed to fly and be mated to our select drones that we shall have in great quantities distributed among the small hives.

E. L. Pratt.

Marlboro, Mass., April 21, 1890.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As thére is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
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HONEY AND BEESWAX MARKET.

KANSAS CITY, April 25.—Market is cleaned up on comb honey. We quote: White 1-lbs., 14c.; 2-lbs., 13c. Dark 1-lbs., 10@12c.; 2-lbs., 10@11c. Extracted is very dull sale at 5@7c. No Beeswax in the market.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

BOSTON, April 19.—Market is strong and well cleaned up on all fancy 1-lbs., at 16c. A small quantity of 2-lbs. on hand sells at 15c. Extracted, 8@9c. No Beeswax on hand. No off grades in any way can be sold here.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and ½ barrels, 7½@8c.; in tin and kegs, 7@8½c.: dark, in barrels and ½ barrels, 6@6½c. Beeswax, 23@26c.
A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax — bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demadn good.
HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 20@27c.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, April 9. — Demand good for choice white comb honey at 12@15c.; dark is very slow sale. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@25c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1mly.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

◆

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Mention the American Bee Journal.

WANTED Reliable, energetic Agents. Salary from start—or commissions for local men devoting part time. L. P. THURSTON & Co., Empire Nurseries, Rochester, N. Y.
18A3t
Mention the American Bee Journal.

Tested Italian Queens now ready at $1.00 each. Bees by the pound, 75c; also Nuclei and Untested Queens. See American Bee Journal since March 15th.
16Atf LUTHER W. GRAY, ORLANDO, FLA.
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17A3t—5M3t
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JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**
Mention the American Bee Journal.

WHERE DO YOU LIVE?

IF YOU will let me know I will send you my Circular for 1890 which will tell you all about the Hive we are selling for **55c**; and if you want 25, can let you have them for **49c.** Also 100 Brood-Frames for $1.00.
WM. H. BRIGHT,
15A4t MAZEPPA, MINN.

BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
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Carniolan Bees!

Pleasantest Bees in the World.
Hardiest to Winter.
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We offer to any one who will send us $1.25, a copy of our paper and a nice Carniolan Queen. The Queen alone is worth $2.00. Address,

"THE ADVANCE," MechanicFalls, Me.
16Etf

Mention the American Bee Journal.

1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

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My 22nd Annual Price-List of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. H. H. BROWN,
14E4t 23C2t Light Street, Columbia Co. Pa.

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A 50-cent monthly that gives the cream of apicultural literature; points out errors and fallacious ideas; and gives, each month, the views of leading bee-keepers upon some special topic. Three samples free. Send for them, and learn how to get the back numbers cheaply.

W. Z. HUTCHINSON, Flint, Mich.
10Etf

Mention the American Bee Journal.

H. G. FRAME, North Manchester, Ind breeder of **Italian and Carniolan Queens.** Bees by the pound and Nucleus. Price-List FREE. Reference—First National Bank. 10Etf

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Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,
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E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t

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A. F. STAUFFER & CO.,
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Mention the American Bee Journal.

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For $1.25 I will send by mail, postpaid, distinctly labeled, and carefully packed, 6 good plants of each of the following 12 kinds of choicest pansies: King of the Blacks, almost coal black. Snow Queen, flowers of a delicate pure satiny white. Emperor William, splendid ultramarine blue, with purple violet eye. Rex, deep velvety purple. Azure Blue, very fine. Pure Yellow, large golden flowers. Rose Marbled, very beautiful. Delicate Porcelain Blue, white centre. Mahogany-colored, very fine. Striped and Mottled, exceedingly beautiful. White Treasure, a perfect gem. Gold Margined, strikingly handsome. If you want the handsomest Pansy bed you ever had, send for this collection. Plants will be ready May 1st and I will send to any post-office in the United States or Canada for $1.25, postpaid. All orders promptly acknowledged and notice given you when plants are mailed. Beautiful catalogue of choice vegetable and flower seeds and other plant and seed collections, &c., free. Send for it. Address, F. B. MILLS, Seedsman and Florist, Thorn Hill, Onondaga Co., N. Y.
2M4t—5C4t

A NEW DISCOVERY!

THE COMMON-SENSE HONEY EXTRACTOR is strictly scientific, powerful, durable, handy, clean and rapid, and differs from all others, and is cheaper than the cheapest at slaughter prices. CIRCULARS FREE.

REV. A. R. SEAMAN,
NEW CUMBERLAND, Hancock Co., W. VA
16E2t

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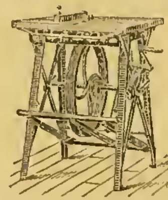

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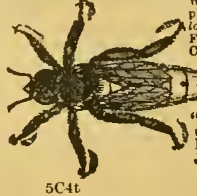

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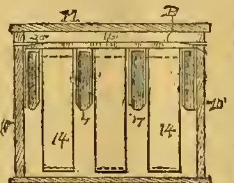

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ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 10, 1890. No. 19.

EDITORIAL BUZZINGS.

May ! most beautiful month of May !
Bright with sunshine or dripping in showers ;
With flying feet you pass away,
But your gifts outnumber by far your hours.

◆

☞ The Detroit International Fair and Exposition will be held at Detroit from Aug. 26 to Sept. 5, 1890, and will use the premium list adopted by the Michigan State Bee-Keepers' Association. The managers are to be congratulated upon securing friend H. D. Cutting to act as Superintendent of the Bee and Honey Department. He may be depended upon to make it pleasant for exhibitors.

The managers of the Exposition are making preparations for a monster exhibit, and the bee-keepers must not be behind. Their exhibit should be the finest ever made at any Fair.

◆

Pomology.—The United States Department of Agriculture is preparing, under the supervision of the Chief of the Pomological Division, to issue a very full report on the many varieties of fruits grown in this country. This report will consist largely of the actual experience of practical fruit-growers in all sections of the country, and in order that it may be as comprehensive as possible, the Pomologist, Mr. Van Deman, will be obliged to all practical fruit-growers willing to contribute their experience and reply to the circular of interrogatories which he has prepared for the purpose, who will send him their name and post-office on a postal card—address H. E. Van Deman, Pomologist, U. S. Department of Agriculture, Washington, D. C. All those who assist in the work of this report in the manner indicated, will receive a copy when published.

The Columbian Fair will be held in Chicago, in 1893. The Fair Bill having passed both houses of Congress, and receiving President Harrison's signature, it thus becomes a law. A great Naval Display will be given in New York harbor just before the Fair proper opens in Chicago. That will serve as a signal to the whole world, that the grandest exposition of this or any previous century invites all nations to visit Chicago, and behold the wonderful progress of civilization, as shown in the finest display of products and manufactures ever brought together in one exhibition. Chicago, as well as America, has an opportunity to cause honor and glory to be reflected upon her people, which she will not be slow in embracing.

Let the bee-industry also measure up to the opportunities of the time and place ; thus will its devotees share in the resulting honors and benefits.

This will give Dr. A. B. Mason, on behalf of the bee-keepers of the United States, and Mr. R. McKnight, as the representative of Canadian apiarists, a splendid chance to display their abilities in providing for magnificent exhibits of apiarian products and supplies.

◆

The Rights of Bees to exist and gather honey, and of the pursuit to a place among commercial products, notwithstanding the prejudice of the ignorant, are thus stated in the Rhode Island Experiment Station Bulletin No 4, under the heading of "Bee-Keeping :"

> We believe and have endeavored to show that bee-keeping is of sufficient importance to deserve the encouragement and protection of the State. That bees are of great service to growers of various crops, as well as profitable to their keepers for their honey and wax. That honey-bees do not injure sound fruit, and that the damage done to unsound fruit must be comparatively light. That to prohibit bee-keeping is unconstitutional, and that no one need refrain from keeping them on account of opposition due to ignorance, fear, jealousy, or the ill-will of their neighbors (though all reasonable precaution should be taken to prevent annoyance or accident). That this prejudice against bees is sure to give way to public opinion in their favor. That a widespread knowledge of bee-keeping would increase the products of the State.

◆

The Flower Feast, or Combat of Flowers, was celebrated in the city of Mexico, on April 27, 1890. Fully 100,000 people were on the promenade of La Reforma and the Avenue Juarez. Besides about 500 unadorned carriages containing sight-seers, there were over 40 decorated with flowers and ribbons, and fully 1,000 horsemen. The quantity of flowers must have been enormous, as 4 carloads came from Julapa, alone. What a Paradise for bees !

◆

☞ J. & E. Pockat, of Marion, Wis., have issued a 4-page Catalogue of Bee-Keepers' Supplies.

Grafting and Grafting-Wax.—As this is the season for grafting, and as many of our readers are also growers of fruits, we give the following directions for doing the work of grafting apple-trees, and also a recipe for making and using the wax employed. The importance of selecting the best varieties of fruit in grafting, should not be overlooked, as well as to see that the work itself is properly done. These paragraphs are taken from one of our agricultural exchanges:

> The implements needed for grafting apple-trees are: A small saw, for cutting off the branches for grafting; a good, strong knife with a thick back to make clefts in the stock; a small knife, kept very sharp, with which to prepare the cions; a grafting-wedge and chisel, and a mallet. The grafting should be done as soon as all danger of severe frosts is past, and the buds show signs of swelling on the trees to be grafted. The wood to be used for cions should be cut before the buds swell, and be stored in damp sawdust or moss in a cellar.
>
> There are many compositions used as a grafting-wax, but we have found none better than one made of the following : Four parts of common rosin, two parts of beeswax, and one part of common tallow melted together, and when cool, worked up into convenient rolls. If it is to be used in cool weather, add a little more tallow. Some of this wax may be spread when warm on cloth, and this cut into strips for wrapping around large stocks.

◆

☞ Prof. N. W. McLain, Director of the Agricultural Experiment Station of the University of Minnesota, at St. Anthony Park, gave us a call last week. The Professor has had a three-months attack of *La Grippe*, which has left on him a visible manifestation of its strength. Like many others, he cannot "shake" the monster off. The Professor's management of the Agricultural College seems to have met the expectation of the Board of Managers, and the Work of the Station is being greatly extended and enlarged. The Professor is a good manager, and will doubtless become very popular at the College.

◆

☞ M. A. Williams, of Berkshire, N. Y., has issued a 12-page Catalogue of Bee-Keepers' Supplies, with calendar attached to hang on the wall, It is unique, but very late—4 months of the calendar having already expired. Mr. Williams also buys honey in its season.

◆

The Bee-Question—"To bee or not to bee"—is discussed quite forcibly in the following conversation, which shows the advantage to be derived from keeping on right side, or end, of anything—even though it is only a bee :

> Breslow—Say, Cummings, don't you want to buy a hive of bees ?
>
> Cummings—Not I. Tried 'em a year, and was stung just 647 times.
>
> Breslow—They must have been cross. You didn't get on the *right side* of 'em.
>
> Cummings—Great Scott ! I did, too. I was extra careful about that, but I always seemed to strike the *wrong end*.

GLEAMS OF NEWS.

The Wiley Lie About Honey.

In the *Popular Science Monthly* for May, we find a very interesting article from Allen Pringle, of Selby, Ont., replying to the celebrated Wiley *lie* in the very periodical which first gave that monstrous falsehood to the World. Millions of copies of the Wiley fabrication have been made by other periodicals—every one of which should now be glad to publish the refutation—that is, if they desire to be honest !

On account of the interest which bee-keepers have in the thorough contradiction of that diabolical deception of Wiley, given in the *Popular Science Monthly* 9 years ago, we will copy Mr. Pringle's article in its entirety. Here it is:

Artificial Honey & Manufactured Science,

By ALLEN PRINGLE,

President of the Ontario Bee-Keepers' Association.

We are told that this is a scientific age, and the statement is undoubtedly true. The world now more than ever before looks to science as a secular if not a spiritual guide. However much their speculations may be questioned and controverted, the scientific book and the scientific man are popularly accepted as authority, at least on matters of physical and historical fact. The veracity of science, therefore, is, or ought to be, above suspicion.

How careful, then, ought the teacher and exponent of science to be that his assertions are true; that his alleged facts are facts; and that even his speculations are free from the appearance of dogmatism ! He needs to be especially particular when writing for the general public, for people untrained in science will accept his statements as expert testimony. Errors will thus be sure to mislead his readers, many of whom are without the knowledge that would enable them to discriminate between the true and the false in his assertions.

In the *Popular Science Monthly* for June, 1881, appeared an article on "Glucose and Grape Sugar," by Prof. H. W. Wiley. In that article the following unfortunate statement was made: "In commercial honey, which is entirely free from bee-mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery." To say that there was not one word of truth in that extraordinary assertion is the short and proper way to put it, and that is exactly what I undertake to say. There was not a tittle of evidence that any such honey had ever been made, up to that time, nor is there a particle of evidence that any such honey has since been made.

Nevertheless, this vile slander on an honest and honorable industry has done incalculable injury to bee culture in America, if not throughout the world. A lie is said to travel half round the world while the truth is getting ready to start, and this one proved no exception. Though contradicted and refuted over and over again, it still lives and is still going. Newspapers still keep iterating and reiterating Prof. Wiley's slander, but they seldom publish a correction.

Thousands of people, common and uncommon, still believe that scientific yarn that comb honey is manufactured throughout without "bee-mediation," and why should they not? The former believe it because the newspapers say so, and the latter because the magazines and encyclopædias say so ; for it is a fact that this itinerant fiction has actually found a place in the American Cyclopædia, and the American Supplement to the Encyclopædia Britannica. In justice to the latter, however, it must be said that the British work, whose publishers repudiate the American Supplement, contains nothing of this.

Here is what the American Cyclopædia says on the subject: "Glucose is very extensively fed to bees, which eat it with great avidity, and store it away unchanged as honey. It is also put up directly in trade as honey—with which bees have had nothing to do—being put by means of appropriate machinery into artificial combs made of paraffine" (page 834, Vol. VIII, edition of 1883).

The American Supplement to the Encyclopædia Britannica has this information on the subject: "Honey is manufactured on the same plan, only here the bees are employed to assist in the fraud. They are furnished with a supply of starch-sugar, which they store in their combs, when these combs are also fraudulent, being made from paraffine and furnished to the bees, who fill them with glucose and cap them with genuine wax. It is difficult to see how the art of adulteration could be carried further" (page 41, Vol. I, Hubbard Brothers, Philadelphia and New York, 1885).

Argument and refutation failing to kill the falsehood, the editor of *Gleanings in Bee-Culture*—a responsible man financially—offered a reward of $1,000 to any one (including Prof. Wiley) who would produce some of the so-called "manufactured" honey, or designate the place where it was made or could be found. This offer is still open and good. The writer of this article also offered through the press a reward of 100 colonies of bees (equal to about $1,000) to any one who would produce some of this "artificial honey." This offer also is still open and good. None, however, has ever been produced. No one has yet come forward to claim the cash or the bees.

Prof. Wiley had supplemented the assertion above quoted with the following additional information, probably to encourage the manufacturers: "This honey" (that is, the manufactured article) "for whiteness and beauty rivals the celebrated real white-clover honey of Vermont, but can be sold at an immense profit at one-half the price." Now, had that business of honey-manufacture been as practical as profitable, the temptation to embark in it would have been almost too much for human nature to resist. But it seems nobody went in, while nearly everybody believed that other bodies were in.

However, Nature's dearth is likely to produce conviction where facts, arguments, and rewards failed to do so. The seasons of 1887 and 1888, especially the latter, were unpropitious for the "little busy bee," and yielded but little honey. The crop was a general failure, not only in America but in Europe. The *modicum* of honey produced, especially of comb honey, was soon exhausted, and the dealers as well as consumers, North, South, East and West, were crying out for honey.

The producers were inundated with letters and orders which they could not fill. Now, here was *the* grand opportunity for the manufacturers of "artificial honey." If the article could be sold "at an immense profit at half the price" of the genuine article, as Prof. Wiley assures us, these bogus manufacturers could have coined money—there were "millions in it" apparently. But they failed to appear. The glucose was available, the paraffine ditto, and the "appropriate machinery" ought, in the interval under the law of progress, to have become still more "appropriate" and perfect in its work; but, strange to say, the famine of honey continued.

The tempting prices were offered in vain. Not a pound of the stuff ever "materialized," so far as anybody could find out. Nor was this gap in the extracted honey caused by the drouth, filled by any artificial substitute, which also goes to prove that the prevalent notion that honey is extensively adulterated has very little foundation in fact. Considering the comparatively low market prices of honey the past few years, and the facility with which the genuine article can be produced in modern scientific bee-culture, adulteration would hardly pay for the trouble.

That there is but very little adulteration, either of comb or extracted honey, may be safely asserted. The prevalent popular belief to the contrary may be accounted for in two ways—by the prevalent ignorance of the character, and what I might call "the habits of honey," and by the erroneous teachings and misleading reports of the authorities under review

While it may be said, in general terms, that honey chemically consists of sugar and water, in the proportion usually of about 75 per cent. of the former to 25 of the latter, these elements vary so much in their proportions in different grades of honey, gathered from so many different flowers at different seasons of the year, that there is no sure test, chemical or other, of honey.

Even the polariscope, but recently considered a certain test of its purity, and still so considered by some analysts, is found to be uncertain and unreliable. While generally in pure honey the ray of light is turned to the left, some samples, equally pure, though perhaps stored rapidly and capped prematurely, may contain so much cane sugar that the ray is turned to the right. Hence the mistakes of chemists, relying upon the integrity of the polariscope, in passing upon the purity and impurity of honey. They have pronounced samples adulterated which were known to be the pure products of the flowers gathered by the bees.

Every apiarian specialist knows that during the course of one good honey season, beginning with the early spring bloom of willow, maple, fruit, etc., and ending with the fall bloom of golden-rod, buckwheat, etc., he can get nearly a dozen different grades or kinds of honey—in color from the very light, almost transparent linden, to the turgid and black buckwheat, and in flavor from the mild and delicious sweet to that which is strong, rank, and quite unpalatable to some tastes. Let a person with no special knowledge of honey be presented with the former for his sight and palate, and then with the latter, and, ten to one, he will declare that the one sample is not honey at all, but a vile imitation.

Then, again, good, pure honey, through mismanagement, may become so deteriorated in quality and altered in taste as to at once provoke suspicion of adulteration.

Granulation was also regarded as a sure test of the purity of honey, but it is not so, as some pure grades, containing only the non-crystallized sugar, will not granulate; while other samples mixed with glucose will granulate. The light-colored and best grades of honey will be fine-grained in granulation, while other grades will be coarse-grained, and present the appearance of sugar for certain to the uninitiated.

When an honest man falls into an error, he is always willing to correct it as soon as it is pointed out to him and proved to be such. Prof. Wiley was expected to do that much at least toward repairing the injury he had wittingly, or unwittingly, done the whole fraternity of bee-keepers. But Prof. Wiley failed to do so, so far as the public knows. He neglected—I may safely say refused—to make the *amende honorable*. The apiarists became incensed, indignant, and demanded proof of his assertion or a retraction. The Professor of science vouchsafed neither the one nor the other.

Finally, after years had elapsed, being still hotly pursued by the apiarists and bee-periodicals, especially the AMERICAN BEE JOURNAL, Prof. Wiley did manage to make an explanation or "statement;" which, however, in no way improved his position before the public either as an honorable man or a professor of science. About 7 years after uttering the slander to the world, he speaks, and makes this astounding admission:

"At the time, I repeated this statement more in the light of a pleasantry than as a commercial reality, for I did not believe that it was possible commercially to imitate the comb." (Letter dated Washington, D. C., May 29, 1888, addressed to W. M. Evans, and published in the AMERICAN BEE JOURNAL of June 13, 1888.)

In this attempted justification of himself, Prof. Wiley says that he had heard from a friend of his (now deceased), that comb honey was manufactured in Boston as stated above. On the strength of that, and alone, he made the deliberate assertion which I have quoted from the *Popular Science Monthly*.

Now, after reading and re-reading the context in the *Popular Science Monthly* article, I find not a shadow of evidence that this statement was meant for a fiction and not for a fact. It is given seriously and deliberately, along with other alleged scientific facts, with no intimation or indication whatever of its spurious character.

The readers (and no doubt the publishers) of the *Popular Science Monthly* accepted the statement in good faith as a fact. The newspapers, of course, accepted it as true from so respectable an authority as the *Popular Science Monthly*, and even the encyclopædias finally took it in. Indeed, nobody, it seems, took it as a fictitious "pleasantry," or even dreamed it was meant for one, till the exigencies of the case required such a construction (or misconstruction) from the author himself.

If it really was meant as a harmless scientific squib, with no *malice prepense*, the question arises, How is it that the Professor neglected to set the matter right when he found that everybody was taking his joke seriously, to the great detriment of an important industry, and the calumnious aspersion of honest honey-producers?

THE WORKER-BEE THEORY.

Another example of spurious science is now before me. The *Medical Standard* for June, 1889, contains a leading article on Embryology, by a learned New York doctor, in which we are gravely informed that a "worker-bee is a highly organized creature, with a well-developed brain, wonderful sense-organs, intricate muscular apparatus, and yet it is an offspring of an unimpregnated queen-bee."

Now, this is all well put and quite true, except the last clause, which is just the opposite of the truth. Any apiarian specialist could have told the doctor that while it is true that the virgin queen-bee lays eggs which produce drones or males, she never deposits eggs which produce females—that is, workers and queens—until after she is impregnated by the drone. Hence, the worker-bee is *not* "an offspring of an unimpregnated queen-bee."

While it would be obviously unfair and unreasonable to hold the *Monthly* morally responsible for the specimen of *wily* science and its results to which this article refers, it is, perhaps, not entirely free from blame in allowing the matter to rest uncorrected so long. I take the liberty of here suggesting to publishers of encyclopædias and scientific works, the wisdom of first submitting doubtful points and dubious assertions, made by men outside their special departments, to *practical* men in such departments, whether the latter be learned or unlearned, for the knowledge of an unlearned man touching his own particular line of business (even the science of it) may exceed that of the scientist both in accuracy and extent. Such a course would often save the specialist from humiliation, and spare the pulic the infliction of some very queer science, which, not infrequently, fails to dovetail with every-day facts.

In a letter from Mr. Allen Pringle, just received, he comments upon the above article and its publication in the *Popular Science Monthly* as follows:

The article came into existence in this way: About 8 years ago Prof. Wiley contributed an article to the *Monthly* on "Glucose and Grape Sugar," in which he slandered every bee-keeper in the world. A few months ago I was invited by the editor of the *Popular Science Monthly* to contribute an article to its pages dealing with Prof. Wiley's misrepresentations, he (the editor) having but recently become aware that Prof. Wiley's article had done injury to American bee-culture, and being willing and anxious, as soon as so enlightened, that the error should be exposed and refuted through the same medium of its original promulgation.

This was highly creditable and honorable on the part of the *Monthly*, and stands in unpleasant contrast with the conduct of the author of the mischief when his error and its baneful effects were pointed out to him and urged upon him time and again.

Of course I responded to this appeal on the first opportunity; but, as is the case with most magazines of this class, pressure of matter delayed the appearance of this article for a few months. But it is now published, and it remains to be seen whether Prof. Wiley will still make the *amende honorable*, so far as he can, through the same medium. ALLEN PRINGLE.

Selby, Ont., April 26, 1890.

QUERIES and REPLIES.

Swarms Decamping After Being Hived.

Written for the American Bee Journal

QUERY 706.—Are new swarms that are hived on the old stand, more liable to decamp than if placed in a new location? The only swarm that I ever placed on the old stand, left the next day.—New York.

No, sir.—J. P. H. BROWN.

I think so.—EUGENE SECOR.

An experience of 18 years says, "No."—G. M. DOOLITTLE.

I do not think that it makes any difference.—A. J. COOK.

No, I do not think that has anything to do with it.—H. D. CUTTING.

I sometimes think that they are, but I do not know.—R. L. TAYLOR.

I do not know as they are. I always hive swarms that way, and never had one leave.—A. B. MASON.

I think not; but I have not tried it often enough to give a positive answer.—MRS. L. HARRISON.

I believe that they have a little aversion to the old stand, though I am not sure.—J. M. HAMBAUGH.

No. I have never had one to come out after being so hived. My bees never swarm out after being hived.—M. MAHIN.

We have never seen a swarm leave the old stand, but we presume they may, if they have an unfertilized queen.—DADANT & SON.

No. I have hived all swarms on the old stands, and very seldom lost any. Years ago, when I placed the swarms on new stands, I lost lots of them.—C. H. DIBBERN.

I do not think that it will make any difference; at least, I have not found that it did in my own experience. Decamping is the exception to the rule, and does not seem to be governed by any rule whatever.—J. E. POND.

I do not know that there is any; I should think there might be less danger if put in an entirely new place, where the scouts could not find them.—C. C. MILLER.

No; your swarm left from some other reason. I have practiced this system a great deal, and do not recollect of ever having a swarm decamp, when properly hived in this manner.—WILL M. BARNUM.

No. Why should you thinks so, when you never tried but one? "One swallow does not make a summer," nor one experiment, and, many times, half a dozen on some points tell nothing definite.—JAMES HEDDON.

I have hived a great many swarms on the old stand, and never had one decamp; but I have had swarms attempt to decamp, that were placed upon a new stand in the hot sun. Excessive heat in the hive seems to be the principal cause of absconding swarms after hiving.—G. L. TINKER.

I think not; in fact, I think not half as likely to. I have hived all my swarms on the "old stand" for several years, and not one swarm has deserted. There is once in awhile—perhaps once in ten years—a season that produces chronic decampation. There is a cause for such a state of things, or rather causes, but I cannot discuss them here for want of space. It is enough to say that scarcity of pollen may induce bees to decamp for other quarters, and the disturbed state of two or more queens with the swarm will break them up in many cases. The latter is the most fruitful cause of desertion.—G. W. DEMAREE.

We do not think that it makes any difference; superstition would be the only excuse for thinking that there was any difference.—THE EDITOR.

* * *

Propolis or Bee-Glue on Hands.—In manipulating the frames, the hands of the operator become quite sticky and gummy, and to remove this disagreeable matter readily is very desirable. Soapine is highly recommended for this purpose. It is a preparation of sal-soda and dried soap, and can be secured at nearly all grocery-stores at 5 cents per package, which will last a long time, if kept dry. It is used thus:

Take some warm soft water, and after wetting the hands, rub on a little soap, then pour a little of the powder into the palm of the hands and work them well together; this will soften the hard lumps of propolis, and will dissolve the thinner portions, which are then easily rinsed off.

CORRESPONDENCE.

SWARMING.

Bees Selecting a Home Before Leaving the Hive.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

Some seem to think that bees never select a home before they leave the parent hive, but I think that I have abundant proof to show that they do. Years ago, when my father was keeping bees, we had a swarm come out one day, and, without stopping to cluster at all, it struck a "bee-line" for a tree in a piece of woods about a mile distant.

Around this tree, bees had been seen at work by parties hoeing corn, as it was on the edge of a piece of woods; the bees going in and out of the hole (which was the entrance for the runaway swarm) in such numbers that the workmen thought that it was a "bee-tree" at first; but as the bees worked there only from ten to three o'clock, they thought that honey, or something else was stored there, which the bees were getting; but it transpired that these bees were those from our hive, which had selected this tree for their future home, and so went straight to it without clustering.

Once more: When I first commenced to keep bees, there were none but black bees in this section; but 2 years later an Italian queen was purchased by a bee-keeping friend, living about 4 miles distant. As I was anxious to learn all I could about the bees, I was a frequent visitor at this man's house, and as the Italian queen was purchased in August, I thought that I would wait a year before I procured the Italians, to see how they worked through one honey-season, as our honey-harvest is over before August.

The next year, in June, I was at this friend's house one day, when he said that he had something curious which he wanted to tell me. It was this: About one-half mile from his house was an apiary of black bees which he worked on shares, and while at work there, the day before, he saw Italian bees going in and out of a hive that was empty, and standing on a bench at one side of the yard. He thought that this was very curious, and so taking a seat near the hive, he watched them very closely, and found that the bees went in empty, but when they came out they had little bits of dirt in their mouths, and, by listening at the side of the hive, he could hear a scraping on the inside; said he to himself; "If I am not greatly mistaken, a swarm of bees from my yard intends to occupy that hive, and if they do so, I shall know it." Accordingly, he kept a horse bridled in the barn close by, each day between the hours of 9 a.m. and 3 p.m., ready to go with any swarm that might chance to try to get away.

The third day after this, while he was eating dinner, a swarm came out, and, in circling, they swung out toward this apiary, which he took as a sign that these were the bees that were going to the cleaned hive. He at once jumped upon his horse, when the bees, without clustering, struck out in the direction of this hive. He urged the horse to its fastest run, and arrived at the hive just in time to see the first bees of his Italian swarm settling down in front of the hive, into which the whole swarm entered.

I have always considered the last illustration as conclusive proof that bees do, in some instances, select a home before they leave the parent hive, while *I believed* that it was so, from the first evidence. If they do not, how will the doubting ones disprove the above facts, as I have given them?

THE SYRACUSE HONEY-MARKET.

On page 839 of the AMERICAN BEE JOURNAL for 1888, is a little matter which has been over-looked by me, although I had it marked for a reply at the time. In the article on that page, M. J. W. Tefft seems to wish to convey the idea that apiarists here cut prices on honey to Syracuse buyers, thereby giving quotations which come from that market, a deficiency of one-third as to price, under other markets, thereby injuring bee-keepers "from one end of the country to the other."

I can hardly conceive the object of that item, and the mentioning of the names there given, unless it was to injure the reputation of some of his fellow apiarists, by conveying a false impression. He says: "Syracuse is the home market of Messrs. Doolittle, House, Salisbury, Betsinger," etc., and gives figures to show, that, while honey was quoted from 14 to 20 cents in all other markets, Syracuse quoted it at from 10 to 13 cents.

It is no wonder that the editor calls for an explanation. Well, the explanation is about like this:

Syracuse is a very fickle market on all lines of produce, and, more especially, on honey. If a groceryman has a crate or two of honey, he considers himself abundantly supplied, so when more honey is offered, he will not buy, unless he can get the honey for about two-thirds its real value; the result being, that in proportion to its population, not nearly as much honey is consumed in Syracuse as in other cities, consequently the "little" bee-keepers, who keep from 5 to 20 colonies, and *who do not take a bee-paper*, supply all its wants as to honey, at the low prices quoted.

For Mr. Tefft to try to lay the cause to the parties named, is only proof that he is ignorant of the matter about which he is talking; for, in my own case, I have not even tried to sell a pound of honey in Syracuse for the past 12 years; and, to my knowledge, very much, if not all, of the honey produced by Messrs. Betsinger and Salisbury has found a market elsewhere, for the past 5 years.

Prior to 1878, Syracuse was one of the best markets in the United States; for at that time there was a honey-buyer there who knew what honey was worth, and was willing to buy all that came to him, and pay all it was worth; but since his death, no one has seemed willing to take his place as a buyer After trying in vain to get a party who knew all about this business as carried on by this buyer, to carry on the honey-trade, I left Syracuse, and sought a market elsewhere.

To show the reader that Syracuse was once a good market for honey, I will say that, in 1874, Mr. Betsinger and myself sold our honey there for from 28½ to 29 cents per pound—our whole crops being taken.

Borodino, N. Y.

MINNESOTA.

How the Bees Have Wintered—Statistics.

Written for the American Bee Journal
BY MRS. B. J. LIVINGSTON.

Bees have wintered well here, so far as I can learn. My 8 colonies were placed in the cellar under the dwelling-house on Dec. 15. About the middle of March, one colony began to spot the front of the hive; I took it up through the house (the outside cellar-way being covered with ice), wrapped up the brood-nest well with old quilts, and left it out. It is doing splendidly.

The other 7 colonies I took out to the summer stands on April 10, for on that day the other bees began to carry in their first pollen. All wintered well—there seemed to be more bees than when they were put in for winter. Notwithstanding the complaints of the uneasiness of bees caused by warm weather, mine seemed to be almost perfectly dormant, owing, perhaps, to the cellar-wall being over 20 inches thick. Outside warmth was slow to affect the temperature of the cellar.

The colony that had to be taken out for a flight, had been disturbed by a rat.

The bees began to work on elm blossoms on April 14, and kept it up 4 days; they acted as if they were getting honey.

I watch the BEE JOURNAL for all reports from Minnesota bee-keepers. I believe this to be a great honey-State, especially near the lakes, where linden abounds. There seems to be always something in our groves for the bees.

I send a seed-label which came with seed that I tried last year. It is called "honey or bee clover" (*Melilotus cœruleus*), and came from the United States Department of Agriculture. It is not "sweet clover," but I should call it an *aromatic* clover. It came into bloom within 6 weeks after sowing, which was right in linden bloom. I did not see a bee on it, and it was gone as soon as the linden. It might do better in a season not so dry, but I think that it is perfectly useless here.

I do not believe that there are over 300 colonies of bees in this county. The largest apiaries of which I am informed, are owned by Mrs. Josiah Smith, who has 50 colonies; William Sutor, 100; Corneil Personrus, 100; G. W. Ott, 20; F. S. Livermore, 10; and J. H. Johnson.

This list is nearly, if not quite, correct. If those owning 5 or more colonies in this county (Martin) would send me a statement on a postal card, I should be very much obliged. Also, please state if your bees are wintered in trenches, in the cellar, or in chaff hives; and also give the per cent. of loss during the past winter.

Center Chain, Minn., April 21, 1890.

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RUSSIA.

An Interesting Account of Bee-Keeping in Russia.

Translated for the American Bee Journal
BY REV. STEPHEN ROESE.

There is not another country in Europe where bee-keeping can be carried on to such success as in the domains of the Czar of Russia, and no other country is blessed with such large territories of rich honey-yielding heather as Siberia; nowhere can such immense forests be found as in Western Russia and in Caucasia, and nowhere do we find buckwheat fields, rape, dathe, etc., as in middle Russia, especially Russia Minor. One who has never been in Russia, can form no conceivable idea of the grand forests, hundreds of miles in extent, where bears, wolves, and other wild animals have their home and abode; and much less idea can be formed of the many thousand miles of heather which extend beyond the Ural, where grass and flowers grow in abundance. Bees are kept all over Russia, even at Archangel, at the extreme north, at Tirim and Caucasia in the south, and at Siberia in the east. Farmers and noblemen both engage in this pursuit, for profit and pleasure.

But in spite of all their advantages, bee-keeping in Russia has as yet not been placed on a rational footing—late improved movable-frame hives are not in practice; in localities where forests are near, hollow trees are used as hives, and such hives are in use among farmers and noblemen.

About 10 or 15 years ago bee-keepers in Russia had their attention called toward modern improvements, which credit is due to Mr. Butlerow, Professor of Chemistry at Moscow, bee-keeper, and editor of the Russian bee-periodical.

In northern Russia, Herr Lubareff, present editor of the Russian bee-periodical, has constructed a combination hive, consisting of the Cowan and American hive, which he calls Anglo-Americawiska hive, recommending it in preference to all others as the only one worthy of use.

In middle Russia, Herr H. Podalsky is the only one manufacturing comb foundation, and sells the same for one rubel (about 55 cents) per pound.

The Director of the Gymnasium at Kiev, has become noted by publishing works on apiculture, and introducing a hive called the Lewitzki hive.

A Mr. Ranmowitsch, priest of the Greek church, also publisher of a practical work on bee-keeping, was the first one who introduced the manipulating hive from Galicia into Russian country.

Honey in the comb is sold only in large cities, such as St. Petersburgh, Moscow, Kiev, Odessa, etc., and not very extensively at that, owing to the extensive sugar manufacturing, which has affected the use and sale of honey very materially.

Extracted honey is not offered on the markets in that country, and its use is very limited, but can be purchased of Stichomiroff or Podalski in Kursk. The markets in cities, as a rule, carry mostly pressed honey, which is not of good flavor, owing to its process of preparation, the comb containing bee-eggs, larvæ, young bees, pollen, etc., and are broken up and pressed, and, as a consequence, such honey is not very palatable. A better quality, which is strained, or drained out from the cells, is sold in large cities at high prices—from 50 to 70 kopeks per pound. This is the linden honey, clear and fine in flavor.

In Russia Minor, large quantities of honey are used for "met," without which the annual celebration of church consecration cannot be enjoyed.

A year ago the Consistory (Church Synod) issued a circular to all bee-keepers, requesting them to sell all their beeswax direct to the church (instead of wax-candle manufacturers) for religious worship, on account of too much adulteration; for the patriarchs, and Greek church rules, demand pure beeswax for such candles.

As the press and sound literature are the heralds of glad tidings, it is hoped that Russian apiarists will ere long stand in the ranks with modern bee-keepers, represented by numerous periodicals, and keep pace with the body in the onward march.

Maiden Rock, Wis.

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HIVES.

Small or Large Hives in Which to Winter Bees.

Written for the American Bee Journal
BY M. L. BARNEY.

In regard to the article by Mr. A. J. Fisher, on page 265—"Small Hives *vs.* Large Hives"—I would say that it is a problem with us all. Certain conditions are in favor of both large and small hives, theoretically. The hive that I use, known here as the "Badger State hive," contains 853 cubic inches. I have always wintered my bees in that capacity, and never have had to resort to the sugar-barrel.

In the spring I keep the bees all closed down until the real honey harvest has commenced in good earnest, then I put on a super the same size, and may be 2 or 3. When I am extracting, I put aside one full frame of honey to winter on. In the fall I close them down to the main hive, having it full of good honey, and put them into the cellar, where they remain until the willow blooms. I have taken from these diminutive hives 2,400 pounds of honey from 14 colonies, spring count. Taking increase and honey into consideration, I think, and do know, that I outstrip my neighbors who use larger hives.

Now for some facts: I have a winter depository that is almost frost-proof, and very dry, and well ventilated. I put my bees into the cellar first, and then come my neighbors and deposit 100 colonies along with mine. We put our bees all out on the same day. My bees are quiet, while the bees put in at the same time, are all in an uneasy condition — and why? Theirs have as much honey as mine.

My hives being exactly square, the bees are in a natural condition, and all the honey is directly over the cluster, so that the heat of the bees keeps the honey in an accessible condition; while the bees put in by other parties, having a like amount of honey (and some to spare), have eaten the honey all out directly over the cluster, while there is plenty of honey at the ends of the frames. Now you see that the bees are not in a natural condition—and why? The heat that the bees generate is not directly under the honey. The bees are working with all their energy, changing from one side to the other; a portion of the hive will be damp, and the bees very restless. I think that plenty of honey directly over the cluster is very essential.

Hartford, Wis.

BEES LYING OUT.

Does Lying Out of Bees in Front of Hives Entail any Loss?

Written for the American Bee Journal

BY GEO. F. ROBBINS.

Mr. J. W. Tefft, on page 569 of the AMERICAN BEE JOURNAL for 1889, claims this as a point of superiority of his hive: "My bees do not desert their hives even on the hottest days, but keep at work right along, simply because the provision for ventilation and shade secures their entire comfort." He evidently supposes that when bees cluster out in front of the hive, that they stop work. I presume that view is quite largely prevalent, and that it entails a consequent loss of honey. I more than doubt it. I do not think that "lying out"—as I have been taught to call it—is of itself any disadvantage.

What drives bees out? It is not always, or only, heat, although cool weather will drive them in. On very hot days, bees will desert the supers of hives that are not well shaded or ventilated; but it does not follow, necessarily, that they stop work. Warm weather, an over-crowded hive, nothing to do, or something to do in the way of wax-secretion—one or more, or, it may be, more or less of all combined—are the occasions of bees lying out.

It was the old notion that when bees begin to lie out heavily at the beginning of the clover harvest, it is an indication that they are going to swarm; and it is largely correct. Of course, we know that the conditions that cause one, will cause the other. Those conditions are warm weather, a crowded brood-nest, and a flow of honey. A few warm, close days will drive them out before the honey-flow commences, when but little clustering would be done if there was any nectar to gather. Likewise, when bees begin to lie out very heavy, later in the season, after swarming is all over, it is a pretty good indication that the harvest is failing. In those cases there is nothing to do—and they do it. But it does not follow that lying out always means idleness, in its exact sense. It is true that they do appear to slack up work for a few days before swarming, but that slacking up is more apparent in results than in actual signs of activity; and the new swarm develops an energy and achieves results that nearly, or quite, make up for lost time.

Just before swarming, less honey is stored—afterwards, more—that is all. About as much honey is gathered in the one case as in the other. In the first, the honey goes to the secretion and accumulation of wax; in the second, the accumulated wax is quickly built into comb, which can be quickly filled with honey. Now it *may be that not quite* so much honey comes in during this preparation for swarming; but any system that permits swarming will have the same effect.

Now, why this clustering to secrete wax? Simply this: Wax is fatty matter, and to accumulate fat to the best advantage, inaction is necessary. To be sure, a certain quantity of wax may be secreted in a natural way during the process of labor. A horse or an ox will, when well fed, put on their normal quantity of fat, and work all the time. Or a fowl may lay her normal number of eggs while foraging for, and digesting, food. But to get the most fat on a steer, or the most eggs from a hen, they must be kept largely in a state of inaction. So, a bee may secrete a fair proportion of wax while gathering honey, but much more is obtained with a measure of repose.

Bees hang in surplus boxes to make wax, and to obtain the necessary temperature to work it—I believe more for the former purpose, than the latter; hence, when bees meditate swarming, they "hang" both in the sections and out in front, and after the new swarm is hived, the bees will hang out in front until the following morning. During this time, the honey with which they had gorged themselves before issuing, is converted into wax. Then as soon as the sun begins to dissipate the dews, the cluster outside begins to grow smaller, and, by 9 or 10 o'clock, it has disappeared. So far, if bees must build their own comb, there is no loss.

Of course bees lie out more on long, hot afternoons than in the forenoons. This is because the nectar has partially dried up, and there is not so much to gather. Then, I think, it is when much of the wax which Mr. Hutchinson and others claim to be secreted in a normal way, accumulates. If the honey-flow would continue undiminished throughout the day, I think that the difference between the quantity stored in the combs, and in sections where the comb must be built, would be much augmented. I know that the rapidity with which honey comes in, depends upon the measure in which the season and bloom favor it—not upon how much the bees lie out.

I do not think that it is the best plan to allow the bee-hives to become so heated by the heat of the sun, and the want of a free circulation of air around them, as to drive the bees out of the supers. Still I doubt if the storing of honey is hindered by it, because it only happens at the time of day when but little honey is coming in.

Mr. Tefft argues that he can get three or four times as much honey by keeping bees in one strong colony till after the harvest, as he who allows swarming. I do not believe it. I have no doubt that the claim is honestly made, but I think that he is simply mistaken. If I am wrong, I am willing to be righted. If any have actual testimonies to give to that effect, let us hear them, by all means.

Mechanicsburg, Ills.

SWEETNESS.

A Few Observations About Nature's Sweet.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

The Giver of all good has provided us with a pure sweet, which can be had not for the asking, but for the taking. Nature's chemist makes no mistakes, puts in no unhealthy ingredients of sulphuric acid or lime; her kettles neither boil over nor burn. Her utensils are all fresh and clean, for they have never been used in manufacturing before, and her laboratory is located in fresh air and sunshine, and the distillation takes place in the corollas of flowers. The gatherers are the bees, that sit on the bloom, extracting liquid sweets which they deposit in their sacks to carry home to their hives, where it is canned. The workers are clean and tidy, distinguished for their business qualifications and despatch.

Every farmer's family should have a liberal supply of honey, and the surest way to get it is by owning bees. Then every flower blooming in the hedges, fence-corners, brush-pile, or roadside, becomes a source of revenue.

The following, copied from the *British Bee Journal* of a recent date, shows how bees are regarded by horticulturists across the Atlantic : "I have about 30 colonies of bees at Beccles, standing at the south end of a long garden containing a large number of fruit trees. At the time the trees were in blossom last spring, east winds prevailed, which prevented the bees flying far. The result was most striking. Those trees (plum, apple and pear) surrounding the hives were heavily laden with fruit, whereas the trees in the other parts of the garden away from the bees, had but little fruit upon them. In conversation with the owner of the garden last autumn, he remarked, 'I wish there had been bees all over the garden.' "

Many persons claim that it is better to buy honey of the specialists than to produce it. This season in some localities, one bushel of oats would buy one pound of honey. Which can work cheapest, men and horses, or bees ? To produce a bushel of oats, first there must be ground to grow it upon ; then it must be plowed, harrowed and sowed. When it is grown, cut and threshed, and hauled to market, it must be sold to get the needful to buy one pound of honey.

A family is not nearly as sure of getting a supply of honey when they depend upon buying it, as they are when bees bring it to them. It is something like this : "An old lady who wanted a feather-bed, proposed to raise geese, and pick their feathers to make her bed. Her husband said, "No ; if you want a feather-bed I can raise the feathers easier for you on my hogs' backs than you can on geese, and I will not have them squawking around, for no one can speak without their setting up their cry." She waited until the day of her death for feathers to to grow on hogs' backs, but her bed never materialized.

Peoria, Ills.

BROOD-REARING.

The Apple-Bloom, Clover, Large Hives, Honey-Dew, etc.

Written for the American Bee Journal

BY ALLEN LATHAM.

I went home to Lancaster, Mass., during our Easter recess, and found my bees in a very backward condition. The cold weather of March had prevented brood-rearing, and the bees acted as though it was mid-winter. As I am looking for a fine yield of honey from apple-blossoms, I was somewhat disappointed at the outlook. I fed and dosed the bees that week, leaving them on April 8, awakened to the fact that spring was coming.

Last Saturday—April 19—I again went home, and I wish that those bee-keepers who have never packed bees on the summer stands, could have been present when I opened the hives. For nearly two weeks we have had pleasant weather, allowing the bees to gather pollen almost every day. Most of my colonies are on 6 frames, and every colony on April 19 was spread through the hive as in summer, and in most of the hives there were 5 frames of brood. Some frames were nearly full of brood.

Apple-trees will not blossom for more than two weeks, and I think that most of my colonies will be in condition to store 20 pounds each. I have no difficulty in selling all my apple-blossom honey at twenty-five cents a pound.

Clover is coming on finely. I think that it is the most promising spring for several years. It resembles very much the spring before the best honey season I have known since I kept bees.

LARGE HIVES—HONEY-DEW.

Apropos of large and small hives, I ask these questions : Of what use is a large brood-nest after the main honey-yield has opened ? What is the use of a half-bushel of bees when the season is over ?

Now about honey-dew : Two years ago in July, there fell for several weeks, from a large elm which overtops our house, a species of honey-dew, so-called. I suppose that it came from aphides, although I am not sure. At some times it was liquid, and left shiny, sticky spots where it fell. At other times it came down in the form of minute grains, which were round, white, and somewhat soft. I swept up some of these "grains of manna" from the piazza ; they were of the saccharine nature. The bees did not work on this substance any to speak of.

Cambridge, Mass., April 21, 1890.

SPACING COMBS.

Proper Distance to Space Combs —Cells in Foundation.

Written for the American Bee Journal

BY REV. W. P. FAYLOR.

In this modern age of progress, the art of apiculture, or bee-keeping, like nearly everything else, is attracting the strictest attention. The box-hive will soon be a thing of the past ; the black bee is rapidly giving way to the 4 and 5 banded Italian ; bee-papers are becoming quite numerous ; the honey-extractor, the comb foundation machine, and many other late inventions speak for the progress of the day. Two things, however, surprise me, viz : The tendency of bee-men to space the combs nearer together than the bees build them naturally, and the practice of making foundation cells smaller than the bees build them of their own accord. These two points I have been testing pretty thoroughly during the past 5 years.

I keep but a few colonies of the honey-gatherers, which gives me plenty of time to experiment. For the best results, all things considered, I now space all the combs 1½ inches apart, from center to center. I have proven, time and again, that bees are more liable to swarm where the combs are hung too near each other. When I kept Carniolans I observed that this was even more true of them. Then, if you knock a box-hive to pieces, you will find all the main combs placed not less than 1½ inches apart, and some possibly 2 inches.

Of course, the matter of brace-combs comes in here. Where the frames are spaced from 1¼ to 1⅜ inches, the combs are always more or less braced to each other. I have not found it so by the way I now space combs. I can go to any one of my 10 hives, and find every comb separate and distinct.

We should bear in mind, too, that wide spacing gives more room for the storing of honey above the brood-nest, which is no mean consideration when we strike the winter problem. The above-named are a few of the many reasons why I space bee-combs 1½ inches from center to center.

NUMBER OF CELLS TO THE INCH.

The idea of making 5 worker-cells to the inch of foundation, does not meet my observation. It will do pretty well for one or two years, but after a few years' use, the cells become entirely too small. Any queen-breeder knows very well that queens reared in little, cramped cells, are not nearly so large and nice as those reared in good, large cells. If the cell has anything to do with the size and utility of the queen, then the same rule must apply to the worker bee. I think that the "five cell" theory is a conclusion of a few months' test to rid the hives of drones, more than anything else. But why should we be afraid of getting a few drones in the hives ? Why treat them as a nuisance ? A colony of bees with plenty of drones, I have good reason to believe will store more surplus honey than will a colony without drones. I have had but one year's practical test upon this point, and that has been in favor of the drones. I am about to throw away my old foundation machine, and use one that will make 4½ cells to the inch.

St. Bernice, Ind.

BEE-HIVES.

Description of a Simple, Interchangeable Hive.

Written for the American Bee Journal

BY E. L. PRATT.

A bee-hive adapted to all-around work, and at the same time giving good results in honey, in connection with simplicity and wintering adaptability, has long been sought by progressive bee-keepers. We believe that such a hive will work its own way into popularity with very few words.

For many years we were staunch advocates of the hanging frame, but since we have the wonderful wintering record of a closed-end frame, we shall use it until something better is found. There is a great saving of stores, when this style of frame is used, where bees are wintered out-of-doors, and, in spring, one-third more brood can be cared for.

The frames of this hive are reversible, either singly or as a whole, and they are constructed in such a manner that no brace-combs can be built anywhere about them. They are easily removed and replaced without the usual slow lateral manipulation. Foundation can be fitted into these frames with one-fourth the time and work necessary in the ordinary way, and no wiring need be done, as the frames are built "plumb" full of comb, and are just as strong as wired frames.

Full sheets of foundation can be put into the frames with strength enough to bear a heavy swarm, by the simple and expeditious device employed. There are no corners on this frame to bother, nor projections to strike against each other; no crooked combs can be built. Each frame has a permanent space which ultimates in perfectly flat frames of brood, and smooth, straight spaces between them, just the correct distance to force surplus honey into the supers. There is no chance to crush bees while handling the combs.

The frames are simple and inexpensive, and easily put together. Inside measurements are 8½x17 inches—just the correct size to admit eight 4¼x4¼ standard honey-sections in wide frames, either above or below, or the little combs used in the new method of nuclei management in combination with full colonies.

For comb honey we recommend an 8-frame hive adapted to tiering up. For extracted honey, there is nothing better when half-depth supers are used, and they should be used, as they are easier to handle, and are in every way much better than large combs. However, if the large comb method is preferred, an extra set of brood-frames is all that will be needed.

The body of the hive is in two parts, each having convenient hand-holds for convenience in lifting. Each part of the body can be used for a super, and each super can be used as a part of the body, which is a convenience that all experienced bee-keepers will appreciate, because it does away with about one-half the paraphernalia, and is always convenient in a hundred and one ways.

To better explain, we will say, that two supers will make one body to hold brood-combs, and one body will make 2 supers to hold honey-sections or extracting frames. By having supers and brood-chambers all built exactly alike, expense and complication are greatly modified, manipulation is lessened, and there is never any idle furniture. Time in construction is saved, and we are always ready for an emergency.

The bottom-board and stand on which the hive rests, is so constructed that the entrance can be at the front, in the ordinary way, or at either side. In the spring, there are always weak colonies that need to be contracted to 2 or 3 combs, and it is better to close them up next to one of the side entrances, than to allow them to fly from the front. They can be kept warmer, and built up to better advantage by giving them a side entrance.

Two small colonies can be wintered in the same hive with a side entrance to each. Three queens can be wintered over by the use of 2 division-boards and all 3 entrances. In hot weather, a large colony can be ventilated grandly by throwing open all the entrances, and placing screen-cloth at the sides. Ample alighting places are left at the front and sides, which act as supports for a thin winter-case to admit of packing in winter.

Thus we have the advantage of a chaff, or double walled hive without its disadvantages. This hive can be worked like a single-walled hive in summer, and a double-walled hive in winter. The winter-case is not in the way at all, if left on the year round. The manner in which the bottom-board can be made fast to the hive body, is very simple and strong.

We need not explain the construction of the super shells, as they are exactly like those used for the brood-chamber. They are all halved together, which makes them strong and durable. The end-pieces are rabbeted so as to give finger room to manipulate the section holders, and to make a narrow bearing surface where the shells come together to hold brood-frames.

The section-holders are so constructed that the honey-sections are thoroughly protected from bee-gule and soil. They can be interchanged and reversed with ease, and any style of 4¼x4¼ section can be used, with or without separators. The holders take 1⅞-inch wide sections, or 7-to-the-foot, conceded to be the standard.

For extracting combs, simply fill the section-holder with foundation, and have it drawn out and filled the same as with comb honey. Each frame will weigh about 5 pounds when well filled; if large extracting combs are preferred, another body can be tiered up.

If colonies are found in danger of starving, put on a super containing 4 or 5 shallow extracting-combs of honey, and they will be all right, with no danger of starving even in winter. One of the supers filled with shallow brood-frames will make a first-rate queen-rearing nucleus. The cover is cleated, and will fit any part of the hive, and each part of the hive will fit the bottom-board.

The winter-case is made of ⅜ stuff, and cleated so that each part is strong, yet very light. If desired, this case can be made separable, and the sides used during the summer for shade-boards, or stacked away. No packing need be put about the hives until the bees begin to breed in the spring, but there should be plenty of absorbent material over the frames to carry off the moisture coming from the cluster. Ventilators are provided in the winter roof, and the packing is always sweet and clean. There is no chance for a leak when packed for winter. We can enjoy ourselves in cold weather, for we are sure that our bees are coming through as strong as they were in the fall, when this simple, interchangeable standard hive is used.

HONEY-DEW.

Source of Honey-Dew, and Its Effect on Bees.

Written for the American Bee Journal

BY T. C. KELLY.

My attention has been called again to the subject of "honey-dew." There are many opinions in regard to its origin. I, for one, do not believe that it is the "dew of heaven;" nor do I believe that it is the excrement of a species of aphides. It is a well-known fact that there is held in solution in grass, leaves, and also in the wood and bark of many of our forest trees, a saccharine matter which, under chemical processes, can be brought out, or extracted. A few years ago, a large amount of a dark, disagreeable substance was gathered by the bees in this vicinity, which soured in the hives, causing the greatest mortality among the bees that was ever known in this part of the country; while in some seasons the bees gather honey-dew that is of a light color, and no bad effects follow.

Last fall, a bee-keeper (older than I) prophesied a great fatality among the bees the last winter, on account of much dark honey being stored in the fall; and claimed that it was honey-dew. I disagreed with him, and claimed it to be a mixture of buckwheat and boneset—in the forenoon the bees were busy on buckwheat blossoms; in the afternoon they worked on the boneset until dark; and, the result is, bees never wintered better, or were more healthy in the spring.

I am of the opinion that the honey-dew is a secretion in the leaves, which, under certain conditions of the atmosphere, is forced to the surface; therefore, these insects having a "sweet tooth," find it and congregate there to feed upon it. Nature's laws make the honey, and the bee is the collector of these stores; but let those advocates of the excrement theory sample some of the productions of the bees in that line, and see how much sweet is in it.

Mr. Tyrrel says, on page 264, that trees covered with lice and slugs, and those only, produced honey-dew. Now I do not think that he lives in a wooded country: I have found leaves covered with this honey-dew, but on applying the microscope, I could not detect the presence of any insect. I would be pleased, if some of those believers in the "excrement theory" would be kind enough to send me a dead or dry leaf this summer, having the honey-dew and the apis on it. Pluck it from any tree that can be found in the timber. "The proof of the pudding is in the eating."

Slippery Rock, Pa.

LOSS IN WINTER.

Why Did the Bees Leave their Hives so Abruptly?

Written for the American Bee Journal

BY G. N. BENHAM.

There was a terrible loss of bees all over this section of country, during the past winter. We had a very mild and open winter here, plenty of ice, and but little snow, as the sun would melt the snow to a slush, and at night it would freeze, making the roads a solid bed of ice.

As I reported last winter, I had 42 colonies of bees in the cellar, and a good portion of the time I had to open the outside cellar-door, and also the cellar windows, besides giving upward ventilation through the chimney. I carried great quantities of snow and ice into the bee-cellar to keep the bees as quiet as possible, but one reason I ventilated so thoroughly was, to clear the cellar of a most terrible stench that came from the hives. I made a long hook of heavy wire, that I used to reach into the hives where dead bees accumulated, and pulled them out, thereby giving the bees plenty of fresh air in their time of trouble.

The hives were badly spotted all over the fronts, some of them even to an eighth of an inch thick on the alighting-board. I am a beginner, and how I did it, I scarcely know, but I only lost 3 colonies in the cellar, and 2 of these I can account for, as one starved, and the other was queenless, but the third died of this "mysterious disease," as the old bee-keepers call it.

I would like to be enlightened on the probable cause of this great loss of colonies.

Then, we have sustained a great loss of colonies this spring in another way. On April 11, the temperature was from 80° to 86° above zero in the shade, and the country was alive with bees, swarms, queens and all, going in every direction, leaving their hives never to return. I had 4 swarms come out, but I was on hand, and stopped them; I gave them clean hives, and plenty of honey, and they are doing well. One of my neighbors had 24 colonies leave their hives the same day—in fact, we all suffered more or less loss that day.

I would be glad, indeed, to know what caused these colonies to be so displeased with their old home as to leave it, and go in search of a new one. I would suggest two reasons, viz: 1. The hives were so filthy, and the colonies so reduced, that they could not clean them, and they would not live in such filth. 2. Hunger was "staring them in the face."

I have bought a few more colonies this spring, enlarging my apiary to 46 colonies. I am feeding only such colonies as need the honey to eat. I have induced one old bee-keeper, who has 40 colonies in box-hives, to use the Langstroth hive, and to exchange the "starch-box caps" to the super and one-pound sections.

Red Wing, Minn., April 25, 1890.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, postpaid.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 10.—York and Cumberland, at Buxton Ctr., Me.
C. W. Costellow, Sec., Waterboro, Me.

May 13.—Cortland Union, at Cortland, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.

May 17.—Haldimand, at Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

May 20.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Good Prospect for White Clover.

Bees wintered pretty well in this part of the country. They were all left on the summer stands, with only a few boards put around them to keep off the wind, and some without any protection at all. They are having a good time now; trees are in full bloom, and there never was a better prospect for white clover. There are plenty of brood and young bees in the hives, and we can expect a swarm any day.

Ed. E. Schmidt.

Carpenter, Ills., April 28, 1890.

A Simple Honey-Board.

I have noticed two or three remarks lately in the Bee Journal, by prominent bee-keepers, to the effect that when the openings from the brood-chambers to the surplus department was much less than those in the ordinary slatted honey-board, still it seemed to make no difference in the amount of honey stored. That being the case, why not make the honey-board with only two or three broad slats? or have it simply one solid board, with two or three long slits cut in the centre? A queen excluding strip could be tacked over these, if desired. It seems to me that such a board would be much easier to make, and, moreover, stiffer than the slatted board.

Horace N. Jones.

Clay Center, Nebr., April 25, 1890.

Large or Small Hives.

The schools of to-day impart information by object lessons. The eye sees things when the rod fails to make any impression on the mind for good. For the 99th time, "large or small hives" have been harped upon. A small hive is not advocated by a solitary writer, but a small brood-chamber is a different matter entirely. My object lesson will show this difference, which Mr. Fisher has not learned in his 30 years' experience, as given on page 265. The brood box or chamber is 13 inches wide from front to rear, by 13½ across the frames, by 10½ deep below the rabbets, containing 9 brood-frames which are the equivalent of 9 Gallup frames in square inches, as nearly as figures can be put together. To this brood-box we can add a pantry and store-room at the ends, making the hive 24 inches long on the inside, and have a half or full story above. Is this a small hive? But to make the object lesson effective, we take 5 T supers for the 8-frame Langstroth hive. They are scant 13x18x4½ inches deep, I believe. We stand one in each end of the hive, and there is 4½ inches yet to the under side of the cover—space for half a super more. We tier up 2 more supers between and over the brood-frames, the space being 14x15 inches—here we will have to cut some, but the room is ample to store away all of the 5 T supers. Is this hive small? In Mr. Fisher's 30 years' experience, has he ever seen one much larger? John A. King.

Mankato, Minn.

Improvements in Extractors.

It seems to me that one of our most practical implements in the apiary is being neglected, or I fail to be up with the times—this is the extractor. I see but little written in the way of improvements on this machine. I have three in use now, but they are all deficient. Will some of our liberal bee-keepers furnish suggestions and light on this subject? I want to buy the latest improved for this season, to last till there is a better one. F. H. Walker.

Wintered Well—Loss by Fire.

Bees, I think, have come through the winter in good condition, although I have heard some complaint from those who had bees in cellars. My bees, wintered on summer stands in single wall hives, are in better condition than I ever had them so early in the season. At about 3:30 o'clock, on the morning of April 14, my father-in-law, Mr. S. B. Landon, of Brookton, N. Y., lost his dwelling-house and most of its contents by fire; 60 colonies of bees in the cellar were entirely consumed. The loss was covered by insurance, which included the bees. Wilber G. Fish.

Ithaca, N. Y., April 28, 1890.

Transferring Bees.

The article by Mr. Julius J. Petty, on transferring bees, found on page 265, is, in substance, what I have intended writing, and now I would like to add one or two additional ideas. First, emphasize Bingham's smoker instead of enclosing in a parenthesis; and the box is to be preferred to any way that I have ever tried, only I should use a nail-puller instead of a cold-chisel, cutting around the nails before drawing them, letting the bees go up into the box as I cut out the combs, the hive being in an inverted position. They will all get out of the way.

Next, I should use boards (division-boards) covered with batting, and then with oil-cloth; lay the combs on the board, cut to fit a frame with 1, 2, 3 or more pieces. Lay strong wrapping-twine across; the number according to the weight of the combs and number of pieces—6 is usually sufficient. Lay it on another board of the same kind, invert it, and tie with the surgeon's knot, namely, with two loops instead of one. With this knot, you can tie it so that it will not slip, and I think this has been the trouble with using twine. I formerly used sticks, but I have now discarded them, except where combs are very heavy, and the frame is less than ¾ of an inch thick. The V notch I thank Mr. Petty for—if not original with him, it is new to me, and of great advantage in transferring crooked combs. I have never been able to transfer bees out-of-doors—it should be practiced only by the skilled in bee-keeping.

I formerly thought that I could transfer bees only early in the season; now I should hesitate only in extremely warm weather—say 82 degrees in the shade. Last season I transferred a number of colonies in hives containing 40 or 50 pounds of honey. The worst time is during a heavy honey-flow, when the jarring of driving and of cutting nails (with a cold-chisel) daubs the bees with the new honey. I should use a nail-puller, by all means, or a saw that will cut nails would be better.

In placing in the hive, raise the comb with the board until in a vertical position; use all the combs if you work for extracted honey, and discard all drone-comb if you work for comb honey. Straighten crooked and bulged combs by laying them between two boards, and standing on them, as directed by Mr. Doolittle. This applies to combs not filled with honey. Thick and bulged combs can be used by trimming them down after they are fastened; such combs should be given to some strong colony, by hanging them in an upper story.

I should not wait longer than 3 days to remove the twine—in strong colonies, on the second day. The scraps of brood I should also give to some strong colony, by placing them in a vertical position in a second story. If the weather is cool, cover with a gunny-sack, as this is bulky, and works nicely in a second story.

As to re-queening, I should do it whenever I had queens or cells. It is often easy to find a queen while transferring. The temperature of the room should be from 66 degrees upwards. I find 66 degrees sufficient. A slanting platform covered with wax, or a box with a perforated platform—false bottom—to lay scrap combs on, will, if you have much transferring to do, be a great convenience. Have water and towels, and keep everything neat and clean. Thanks to Messrs. Petty, Doolittle and others for an advancement in transferring bees. Thos. A. Anderson.

Gamma, Mo.

Bees in Splendid Condition.

Bees are in splendid condition. On Nov. 22, I put my 14 colonies of bees into the cellar under the house, and took them out on April 6, all alive. I put 4 inches of chaff on top, on the brood-frames, and that kept the combs as dry as they were last fall. There were about 3 quarts of dead bees on the cellar floor. It was between 42 and 45 degrees in the cellar all winter, which is well ventilated. My bees are all in the 10-frame Langstroth hives.

Robert Schultz.

Alma, Wis., April 25, 1890.

What Did Ail those Bees?

On page 249, Mr. Wm. Elliot gives a very plausible reason for the loss of my bees, but as a matter of fact, his reasoning does not apply to my case at all. Since I wrote the article on page 220, I have lost all of those remaining bees, excepting 15 colonies. A careful examination shows that there were over 50 of the 80 colonies Italians or hybrids. They are all dead but three, and one of those is in poor condition. I find that perhaps 10 or 15 swarms died of starvation, while the rest had from 5 to 30 pounds of honey in the hives. The honey is very nice buckwheat and golden-rod. There is no fruit in the town—the honey is nice, and will readily sell for 20 cents per pound.

Mr. Elliot thinks that the bees must have stored the most of their honey in the boxes—from all the Italians I had obtained less than 100 pounds of surplus honey last year; while from 6 colonies of blacks that were standing in a group, I took over 500 pounds of nice comb honey. Every black colony I had gave more or less surplus. I cannot explain why this happened to be so, but it is a fact, nevertheless.

I have lost, from the 80 colonies put into the cellar, 65; less than 15 of them being black bees. Now what did ail them? I have cleaned up the old hives, placing about 10 pounds of nice honey in each hive. I have purchased 105 very large, full colonies of black bees in the old-style hive at a bargain, and shall go at it again this summer with more vigor than ever. I think that I will let the bees swarm naturally, and unless the new swarms are very large, I shall put 2 into each of the hives I have prepared. The 10 pounds or more of honey that I have put into the hives will give the bees a good start, and I presume they will do a good summer's work. Would any of the experienced bee-men advise me to transfer the bees at once, rather than let them swarm naturally? If so, please let me know. Aked D. Ellingwood.

Milan, N. H., April 22, 1890.

Empty Hives in the Woods.

Dear Editor.—There is a law in this State that makes the setting out of a bee-hive in the woods, or any other place for the sake of catching bees, a misdemeanor, punishable by fine or imprisonment. Now, what we wish to know is, what possible harm can it do to any one? Does it in any way injure our neighbors who keeps bees? Does it entice them in any way to abscond. We claim that it does not, but rather that it is a human act so to do, that the bees may have a decent place to set up housekeeping in, when they are driven from the parent hive. I wish that the matter might be thoroughly discussed, and decided either one way or the other. I think that the law is a foolish one, conceived in malice, and carried out in spite. I would like very much to hear what you and others think of it. R. B. Wheaton.

Middlebury, Conn., April 28, 1890.

[The law is one of the many very stupid enactments which disgrace the statute books of America by the ignorance, stupidity or venality exposed in those who inspired them. The only possible excuse is that some one may be *entriched* by a swarm entering the hive, and being cared for. But as the swarm would be lost to the owner, what figure does that cut in the matter?—Ed.]

Heavy Losses in Wintering.

Bees in this region are in rather poor condition, as the winter was unfavorable. The bees gathered pollen during the entire months of January and February, but March and April have more than made up in severity for the preceding mild months. My own bees are doing well enough, but the losses among my neighbors' bees are heavy. M. A. Kelley.

Milton, W. Va., April 28, 1890.

Postal Notes are no safer to use in letters than bank bills. Any one can get the money on them. A Money Order can be obtained at the post-office or at the express office for 5 cents (only 2 cents more than a Postal Note), and is perfectly safe; if lost it can be re-issued.

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History of National Society.	1 50....	1 25
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HONEY AND BEESWAX MARKET.

CHICAGO, May 2.—Receipts of honey are light, and demand fair for choice white clover at 13@14c. Other grades are dull and neglected. Extracted, 6½@7½c. Beeswax, bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 25.—Market is cleaned up on comb honey. We quote: White 1-lbs., 14c.; 2-lbs., 13c. Dark 1-lbs., 10@12c.; 2-lbs., 10@11c. Extracted is very dull sale at 5@7c. No Beeswax in the market.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

BOSTON, April 19.—Market is strong and well cleaned up on all fancy 1-lbs., at 16c. A small quantity of 2-lbs. on band sells at 15c. Extracted, 8@9c. No Beeswax on hand. No off grades in any way can be sold here.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, May 1.—Comb honey sells soon after arrival, if white and otherwise desirable, at 12, 13 and 14c; dark comb is slow at 8@10c. Weather is cool and seemingly favorable to its sale. Extracted, 6@8c, according to quality; some with no distinct flavor has sold at 5c. Beeswax—Yellow, about 27c; fancy, 28c; supply light.
R. A. BURNETT, 161 S. Water St.

MILWAUKEE, May 1.—Demand for honey is rather light. Supply is ample, of both comb and extracted. We quote: Best white 1-lbs., 13@14c; medium 1-lbs., 11@12c; common old 1-lbs., 9@10c. Extracted, white, in barrels and half-barrels, 7@8c; dark, in barrels and half-barrels, 6@6½c. Beeswax, 25@26c; supply light.
A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May 2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.
HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, May 2.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

Convention Notices.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. FULLER, *Sec.*

☞ The Cortland Union Bee-Keepers' Association will hold their annual meeting at the W. C. T. U. rooms in Cortland, N. Y., on Tuesday, May 13, 1890, at 10 a.m. sharp. M. H. FAIRBANKS, *Sec.*

☞ The next annual meeting of the York and Cumberland Bee-Keepers' Association, will be held at Buxton Centre, Maine, on May 10, 1890, sessions at 9 a.m. and 2 p.m. An interesting programme is assured. A cordial invitation is extended to all interested to be present. C. W. COSTELLOW, *Sec.*

* * *

☞ We want of Volume 2 of the AMERICAN BEE JOURNAL—July, 1866, to June, 1867. Any one having it for sale may send us a postal card, saying what he will take for it. Do not send any numbers before we order them, for we only need one set.

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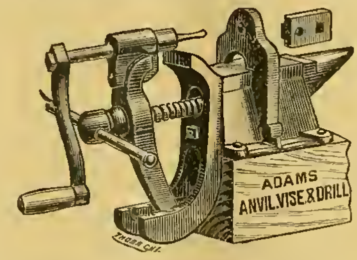

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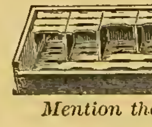

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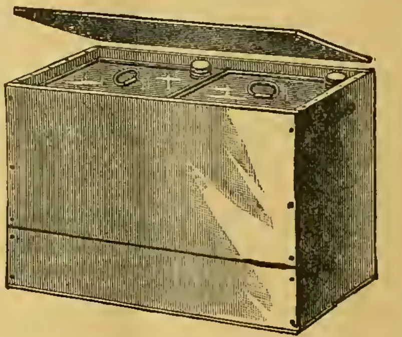
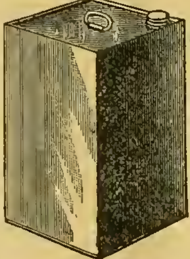


The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can .... (boxed)	$ .45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans	.75
12 boxes "	8.40
100 " "	65.00

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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 17, 1890. No. 20.

EDITORIAL BUZZINGS.

We Pity one who never sees
The butterflies, the birds, the bees,
Nor hears the music of the breeze
When zephyrs soft are blowing ;
Who cannot in sweet comfort lie
Where clover blooms are thick and high,
And hear the gentle murmur nigh
Of brooklets softly flowing.

Accuse not Nature, she hath done her part ; do thou but thine.—*Milton.*

☞ Heavy rains are reported all over the Northwest. The fields are looking green, and when it gets warm again, vegetation will progress rapidly.

Bulletins from the State Agricultural College of Michigan are received. They are respectively: The English Sparrow—Insecticides—and Foul Brood. The latter we will give in full in our next issue.

The Eighth Edition of our book, entitled "Bees and Honey, or the Management of the Apiary for Pleasure and Profit," is now published, and ready for delivery. This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, $1.00, postpaid.

Production of Comb Honey.—To secure a large crop of comb honey we must have strong colonies. The hive must be full to overflowing with bees. A weak colony may give fair returns of extracted honey, but will not work in the sections so as to be profitable. Construct the hive so as to be easy of access in all parts at all times, and capable of being contracted or expanded at will, as circumstances may demand. The surplus cases should be easy of manipulation. The colonies must be kept strong during the entire year ; swarming must be prevented, for when bees swarm they do not store as much honey as those which do not swarm.—*Exchange.*

Bees as Ornaments.—The *Jeweler's Circular* for May contains some remarks on the bees being the favorite for ornamentation. It says :

> Insects are introduced in many of the corsage ornaments. The bee is, of course, a favorite, being copied in diamonds and rubies. In one, a long spray of wild roses, imitated solidly in diamonds, there are at least a half dozen bees. These do not rest on the flower, but make a part of the composition, and can each be separated and be used as a single ornament whenever desired.

☞ The 15th annual meeting of the American Association of Nurserymen, which convenes at the Park Avenue Hotel, New York City, June 4, promises to be a notable event. Reduced fare has been secured in all railroads east of Chicago, and reduced prices also at the new fire-proof hotel. For particulars, address Chas. A. Green, Secretary, Rochester, N. Y.

☞ E. Drane & Son advertised in the American Bee Journal for a man to assist in their apiary. They not only secured such, but they say that they had abundance of applications. That shows the value of an announcement in our columns.

Keep an Apiary Account, in a regular business way. It will be lots of satisfaction at the close of the season to know exactly how the bee and honey account stands, without guesswork. To this end, you should obtain an "Apiary Register," a book gotten up for this very purpose, as well as to keep track of your Queens and Colonies. It devotes 2 pages to each Colony, and a mere glance will give you its complete history. The pages devoted to finance are ruled for Receipts and Disbursements, and being at the end of the book, are always convenient for reference, if properly kept. The book is strongly bound in full leather, and for an Apiary of 100 colonies of bees, only costs $1.00, postpaid. Get and use it, and you will not regret it.

☞ The Catalogue of Martin & Macy, North Manchester, Ind., is on our desk. Bees, Queens, Plants and Eggs.

Moving Bees.—Many inquiries are made by novices as to how to move the bees short distances. Prof. A. J. Cook gave his experience in this line in the New York *Tribune* of April 20. He said :

> If the bee-keeper wishes to move his colonies a short distance—less than half or three-quarters of a mile—he may do so with slight inconvenience.
>
> While fixing our grounds last season, we had to move ours twice, 8 or 10 rods. We did this just at nightfall, after they were done flying. The first day we moved about half of them, taking each alternate colony. In the new position we placed the entrance facing the opposite direction from that of its previous position. We also drove a board into the ground just in front of the entrance.
>
> The new position of the hive as to points of the compass, and the new object in front of the hive, caused nearly all the bees to mark their new position and return to it. The few that went back to the old place joined the colonies still there, and strengthened them. After the bees first moved had had a good flight, we moved the others, at similar time, and in similar manner as before, only leaving 4 colonies, one in each quarter of the old place, to receive any bees that might return. Soon these four were moved, and so far as we could see, we suffered no loss or inconvenience.
>
> The point to be observed is so to change the aspect about the hive that the bees when they come out will note the new surroundings sufficiently to charge their memories; then they will come back to the new home, and not to the old one. Changing from one open ground to a grove will accomplish this.

Bees and Forests.—Bee-keepers are now voicing their protests against the destruction of forests, especially in the originally heavily wooded districts of the older States, for the reason that it means the destruction of that great honey-bearing tree, the linden or basswood. In many localities that tree is the chief source of the best honey, and bee-keepers there view with justifiable alarm its probable early annihilation.—*Exchange.*

☞ George H. Knickerbocker, Pine Plains, N. Y., has sent us his new Circular of Italian Bees and Queens. With it comes a nice little calendar for 1890. It is so neat and convenient that we have it hung up on our desk. No doubt that others will do the same.

Alfalfa should be sown after settled weather in the Spring, in drills about 8 inches apart. Cultivate or hoe once to keep it free from weeds. When just beginning to flower mow it, to keep the stems from being woody. It takes about 15 or 20 pounds to the acre.

☞ We want of Volume 2 of the American Bee Journal—July, 1866, to June, 1867. Any one having it for sale may send us a postal card, saying what he will take for it. Do not send any numbers before we order them, for we only need one set.

The Passing of Winter.

The storm winds blow, and drifts the snow,
But still the winter passes;
And soon we know the flowers will show
Among the slender grasses.

For days are fleet, and violets sweet,
Like tender blue eyes peeping,
From 'neath our feet our gaze will meet,
And set glad pulses leaping.

While daisies pied rank side by side
With buttercups so mellow;
With spendthrift pride, the meadows wide
They'll dot with white and yellow.

And, sad and sere, old Winter drear,
Back to his ken retreating,
Sends Spring-time here, to us so dear,
Our happiness completing.
—*Yankee Blade.*

GLEAMS OF NEWS.

Bees as Pollen Carriers.—From the Hartford *Courant* of Friday, May 2, 1890, we copy the following editorial entitled "A Natural History Lesson:"

"We are indebted to Mr. James W. Cheney, of South Manchester, Ct., who has lately returned from Europe, for a singularly interesting letter upon bees from Mr. Charles Beckington. It reads almost like a romance, and every farmer ought to think it over and follow its useful suggestions.

"Even the children know in a general way that the bees are useful in spreading pollen among bloom, but this is a detailed, explicit statement of the work these insects do and of its good results. Look at the picture of the old fruit farm all revived by merely setting up a few bee-hives. If never a a drop of honey was collected, still the bees would be of the greatest usefulness, by their patient way of laying up sweetness beyond all their possible needs, makes the direct result of their labors also a source of profit.

"The bee is an animal that not only costs nothing to keep, but pays its way as it goes and helps the whole agricultural process beside. The trees hold more fruit from the fact that the bees have carried off the honey; the field crops yield better if the bees have stolen the sweetness from their plants, and the honey itself is a good crop, beside."

The interesting letter mentioned is as follows, and is well worth a perusal:

In September, 1888, Mr. E. Jobard, of Dijon, in eastern France, published a small pamphlet on the "Utility of Bees." This pamphlet produced a wide-spread interest among farmers and fruit-growers; and the author was urged to amplify and popularize his views. This he has done in a neat little volume, entitled "The First Hive."

Mr. Jobard left the home of his boyhood in Haute-Marne in 1846, at which time the old homestead was a charming picture of fruitful prosperity. He became the owner of this old homestead 40 years after, when it had become a depressing picture of dilapidation and decay.

The main points of the preface to Mr. Jobard's book are given below with some paragraphs from his original pamphlet added:

> Returning to my native village after an absence of 40 years, I was strongly impressed with the sterility of the fruit trees. There, where formerly the trees bent under loads of fruit, year after year, I now found only stunted trees bearing less and still less fruit, poor in form and flavor. In the country I found the acquaintances and friends of my youth grown old like myself; and I expressed to them the painful impression which I experienced in finding our orchards once so productive, now fallen into such a state of decay. All had observed the same thing, and likewise agreed in declaring that the evil had commenced taking disquieting proportions about 20 years before; but not one of these suspected the cause of the evil.
>
> Every spring the trees had blossomed admirably, but autumn yields never justified the hopes raised. From the modest home of my father, surrounded by a bit of ground cultivated as an orchard and vineyard, the bee-house which existed when I was young, had completely disappeared. I was soon convinced that in the country where there were once 500 colonies of bees, there now remained not a single one, and the same was true of the entire valley.
>
> For some time I let no opportunity escape of causing the farmers and fruit-growers to understand that the disappearance of the bees was the sole cause of this disaster. But as I saw that my theories made but little impression, I began to rebuild and supply the old bee-house; and with the very first year I obtained a marvelous result.
>
> In front of this bee-house there were 6 fruit trees, 4 plum, 1 apple, and 1 pear tree. In the spring these were covered with blossoms, as were all the other trees in the country. Soon I saw the fruit take form, and each day I led my friends to observe the progress. But, more incredulous than St. Thomas, they refused absolutely to attribute this phenomenon, so visible, tangible and incontestable, to my bees.
>
> When the fruit began to mature, I saw the branches of my trees assume shapes which caused me uneasiness.
>
> At one time I had thought of sustaining them with props, as used to be done. But finally I believed it to be better to carry the trial to its very end. The result surpassed my hopes. The branches of my 4 plum trees broke one after another under their burden. The disaster was so complete that these trees were entirely ruined. I was obliged to have them replaced with others towards the end of autumn. As to my apple tree and pear tree, as I could not allow myself to sacrifice them, I propped them thoroughly, and with great care, just in time to save them. This practical demonstration produced the effect I hoped, and all my friends promised to imitate my example. It was then I conceived the project of grouping in a few pages all the interesting facts, which tend to prove the fertilizing action of bees, in order that I might complete the conversion of my neighbors.

The following paragraphs, taken from the pamphlet on the "Utility of Bees," indicate the beneficial influence of bees upon growing wheat:

> There are some districts in Saxony, where the farmers raise no other crops than wheat, and a wheat of such superior quality as to be always sold at a high price as seed wheat. In these districts all farmers, without exception, have bee-houses, but these bee-houses, instead of being fixed, are mounted on wheels. Some days before the wheat blooms, each farmer hitches his team to his movable bee-house, and conducts it during the night into the middle of his wheat field.
>
> Taking dinner one day at Velaro with several farmers, I narrated this fact, when Mr. Genelot, a farmer of Failly, exclaimed: "Well, then, that is why my finest wheat is always found near my bee hive, and the difference is so marked that ever since I have been at Failly, it is uniformly that wheat which I select for seed-wheat."
>
> Some time after, writing to the Abbe Terrasse, I mentioned this custom of the Saxon farmers, which had been communicated to me by Mr. Weber, of the Dijon botanical garden, and this explanation of Mr. Genelot. In a reply soon after received, the Abbe conveyed the following confirmatory statement: 'On Sunday last, receiving a visit from the Mayor of Langues, I explained to him what was done in certain districts in Saxony, as written by you, on the statement of Mr. Weber. He exclaimed immediately, as did your worthy farmer of Velaro: 'I have a bee-house in the middle of a field, and it is always the field surrounding my bee-houses which furnishes my seed-wheat.'"

The testimony supplied by Mr. Jobard, as to the beneficial effects of bees upon grape vines, fruit-trees, and fruit-bearing trees generally, is more abundant and equally remarkable.

The Abbe Terrasse writing to Mr. Jobard in August, 1888, says:

> My venerated associate of Ninville, an ardent lover of bees, placed in 1883, some hives of bees inside of his walled garden, where for 20 years, thrifty fruit trees persisted, in spite of intelligent care, in refusing to bear fruit. Now, starting from this introduction of bees, pears and apples abounded as by enchantment upon these trees heretofore unproductive.
>
> In the village of A., Mr. J. possesses an orchard lying off by itself in the midst of a plain. Every year he gathers fruit in such abundance as to provoke the jealousy of his neighbors less favored than he, and who rack their brains in searching all sorts of causes for this exceptional abundance. They do not observe that it is the bee-house very near to the orchard which produces this marvel.

The Abbe then adds:

> This then is a principle, from now on incontestable, that bees exercise an influence, I will say a *necessary* influence, in the perfect floral fertilization of fruit trees, cereals, buckwheat, colza, artificial meadows, etc.

The above is additional testimony to the great benefit which bees do to growing crops and fruit-trees. We have before written much on this subject, and now have great pleasure in giving the foregoing article in corroboration of the testimony we have before presented. The *Courant* containing it, was marked and sent to us by one of our readers, but we do not know who it was, or we would give the name.

☞ Dr. G. L. Tinker's Circular and Price List is on our desk. His specialty is Syrio-Albino Queens and Bees.

QUERIES AND REPLIES.

Side-Storing — Enameled Cloth Over the Frames.

Written for the American Bee Journal

QUERY 707.—I use a home-made Langstroth hive holding 9 frames. My locality is not a good one for honey—15 pounds per colony is a good average yield, and often 10 or 12 pounds is all we get. 1. Would not side-storing be preferable in a case like this, as the expense of supers, honey-boards, and the annoyance of brace-combs would be dispensed with, and two wide frames at the side would hold about all the surplus? 2. By using enameled cloth over the frames, could these wide frames at the side be manipulated without disturbing the brood-nest?—Mississippi.

1. No, never.—DADANT & SON.

1. I should prefer top-storing, in any case. 2. Yes.—A. J. COOK.

1. In your case it will work all right. 2. Yes.—H. D. CUTTING.

1. I am a firm believer in hives with upward storing capacity. 2. Yes.—J. M. HAMBAUGH.

Perhaps it would, but I do not feel competent to advise in such a case.—EUGENE SECOR.

1. I think not. 2. The brood-nest need not be much disturbed, as the frames can remain covered.—M. MAHIN.

1. Perhaps it would. 2. Yes, if rightly managed, either with or without enameled cloth.—R. L. TAYLOR.

1. If your average yield is 15 pounds per colony, I should say that your hive is too large, and I should prefer supers to side-storing. 2. Not if there is brood in the combs next to the wide frames.—A. B. MASON.

1. Try it. I should, in your case, use top-storing in preference to side-storing. 2. Yes. A covering of burlap is just as good as the enameled cloth.—J. P. H. BROWN.

I do not know. It would seem that it would hardly pay to keep bees in such a poor locality. But why not experiment, and see.—C. H. DIBBERN.

I should prefer the surplus room on top, but fairly good honey can be secured as you propose. A trial of the two plans will tell you which *you* like best.—G. M. DOOLITTLE.

I have never been much in favor of the side-storing plan, and my advice to you is, if you *do* try it—go slow.—WILL M. BARNUM.

I think that it would be preferable to a case with one-pound sections, honey-board, etc. But why not use the "family box," which is composed of 7 two-pound sections, fastened together with two strips, and glazed at both ends.—MRS. L. HARRISON.

1. Side-storing may do to start, but I am not sure that any one gets comb honey finished well except on top. 2. It would disturb very little. I think that I should prefer extracting, and then if they did not average more than 15 pounds to the colony, I would quit the business.—C. C. MILLER.

1. I do not think that side-storing would be preferable in any case, and the extra labor caused would, I think, more than offset all the claims made here. 2. To some extent, but not entirely. Such a locality as you describe would seem better fitted for extracted honey, than for comb honey.—J. E. POND.

The bee-keeper who attempts to produce comb honey without resorting to some of the methods of contracting the brood-chamber while the bees are storing, will meet with partial or complete failure in any locality. The successful producing of comb honey has become a science, and requires not only a properly-constructed hive, but skill in the management of it. The place to get comb honey to advantage, is above the brood, always.—G. L. TINKER.

1. In answering your question, I would like to know if you fully understand modern bee-culture and honey-producing. From your question, I infer that you do not. It will not pay to keep bees in a locality such as you describe. Side-storing is the poorest of all methods, because bees instinctively store their surplus above their brood. Side-storing will do better if the frames are worked crosswise of the entrance, and the wide frames with sections given a place back of the brood-combs. 2. You can use enameled quilts, and, by folding them forward, lift out the wide frames without interfering with the brood-nest. But by using a section-case on top of the brood-chamber, no honey-board or excluder is necessary, as in your locality you will need but one case to each hive, and have no tiering to do.—G. W. DEMAREE.

No; do not use a side-storing hive under any consideration. In such a case as yours, I would quit the business, or move into a better locality. However, if for some reason best known to myself, I did not propose to do so, I would make Langstroth hives about 12 frames wide, and extract at the side; but I would lift the frames out at the top, for very many reasons which space forbids mentioning here.—JAMES HEDDON.

1. Side-storing, except for getting the bees started in the sections, is out of date now. The sections are much more readily finished when placed over the breeding apartment; in fact it is difficult to get them finished up when on the side of the brood-chamber. 2. If there is brood in the frame next to the wide frames, you could not manipulate them without disturbing the bees.—THE EDITOR.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CORRESPONDENCE.

BEE-HIVES.

A Consideration of Large Hives vs. Small Hives.

Written for the American Bee Journal

BY CHAS. DADANT.

In the article written under this heading, on page 215, Mr. Doolittle shows that he has never tried the large frames, as he does not know how to manage them.

When I came to America, 27 years ago, I had already kept bees in France, and I was quite sure that bees well cared for would give good results. To reach this end, I spared neither work nor experiments. My means were scant, I had a family to support, and I resolved to rely on bees for it.

Four different frames were at that time in vogue, viz: The Langstroth, the suspended Quinby (both long horizontally); the American, and the Gallup (both square), the Gallup being the smallest of all. Before testing them comparatively, I was prepossessed in favor of the American frame, as the hives which I used in France had their frames of about the same shape and dimensions. Yet, after reading the books of Langstroth and Quinby, I resolved to try their hives in comparison with my square or American hive.

Knowing that experiments in bee-culture made on one or two hives, and during one or two years, are not reliable, for there are many causes which may alter the results, I put one or two scores of each kind side by side in the same apiary, and after giving them the same care, I reached the conclusion that the best results were obtained with the Quinby hive enlarged to 11 frames.

A little later, I reared queens for sale, and, dissatisfied with the small nuclei with frames 6 inches square, I contrived to make some of my Quinby frames divisible in two, and I made 25 small hives large enough to hold 11 of these half frames.

The size of these half frames was not far from the size of the Gallup. As it was an easy matter to give to these nuclei either brood or honey, or both, taken from my large Quinby hives—for I had put in most of them a few of these divisible frames—my nuclei were comparatively strong in the fall, especially as I used to unite with others, those of which I had sold the queens late in the season.

I had no trouble in wintering these nuclei; but, in the spring, I was unable, even with the greatest care, to bring any of them to the average strength of the colony in my large Quinby hives. These experiments were continued for about 10 years with the same results. When these diminutive hives had brood in 5 combs in the spring, my large hives had 5 or 6 also, of their large ones, or more than twice as much.

I see that Mr. Doolittle experiences the same difficulties with his Gallup hive, for he writes thus in his pamphlet, "The Hive I Use," on page 8:

> From practical experience I find that it takes about 6 weeks to build up an ordinary colony in the spring, to where they are ready to produce honey to the best advantage; so I commence to stimulate brood-rearing about the first of May...... At this time I find, as a rule, each good colony will have brood in 4 or 5 combs, the 2 center combs containing the largest amount. I now reverse the position of these combs of brood, by placing those on the outside in the center of the brood-nest, which brings the combs having the most brood, on the outside.

Mr. Doolittle performs the same work every week for 6 weeks, and, about June 10, all the 9 frames of his small hives are full of brood.

At the annual convention of bee-keepers held at Rochester, N. Y., last February, Mr. Doolittle said that "he once had a queen that filled 32 combs with brood." As 9 combs of a Gallup hive contain, according to Mr. Doolittle, 44,800 bees hatching every 21 days, the 32 combs had 154,880 cells occupied with brood, the queen having laid 7,320 eggs every day.

I wonder how many times every week Mr. Doolittle has reversed the small combs of this colony to obtain such a laying before the honey crop. I wonder, even more, why he now restrains the capacity of his queens to 2,133 eggs daily, *to get the best results*, especially when I read that the colony with 32 combs gave him 566 pounds of honey. I have never seen such a prodigious laying, although I use very large hives. It seems to me that such a good crop would have increased, instead of lessened, my preference for the large hives.

Our management with these large hives is quite the reverse of that of Mr. Doolittle with his small ones. As he does not like to see his young bees eat too much honey, he contracts the brood-chamber as soon as the crop begins. Not only would it be impossible for us to do the same, for our large hives are too much crowded with bees, but we know that if we want workers in time for the white clover bloom, we ought to prepare our bees during the previous summer; consequently we do not take honey from the brood-chamber, and we give to our queens a full sway.

Of course, with our management, our colonies are more populous in winter; the laying begins earlier; as the cluster of bees on our large combs warms a wider space, the queens lay at least twice as much as in a Gallup comb; and our spacious hives are full of brood and bees at least one month previous to the white clover crop. Therefore, all the defects of large hives, as enumerated by Mr. Doolittle, exist only in imagination.

Hamilton, Ills.

FOUL BROOD.

Methods for Eradicating this Foul Bee-Disorder.

Written for the American Bee Journal

BY C. J. ROBINSON.

On page 292, inquiry is made about foul brood—"What is the best thing to radicate it from a yard?"

Foul brood is not a "disease," but it is an abnormal condition of bee-brood in its chrysalis stage, occasioned by fermentation, which, in all cases, is followed by a change of properties in the substance fermented, arising from new combination of their principles. The grub-brood is not made sick, for the ferment virus kills outright, as promptly as a deadly bullet or the lightning bolt.

All chrysalis grubs are pronely fermentable, and when certain conditions are present, fermentation occurs spontaneously, and these conditions happen frequently in changeable climates; cold damp, followed by heat, is dangerous, because bacteria or microbes are generated wherever the conditions are favorable for fermentation.

When this peculiar fermentation ensues, it becomes contagious, attacking all matter like that in which it originated, and spreading through all of the mass touched by the virus—"a little leaven leavens the whole," but the ferment does not affect the different matter—it does not affect imago bees.

To prevent the spread of infectious matter is the question. To burn "bees, hives and fixings" would be getting rid of so much of the virus-matter, but it would not be certain that *all* the virus would be burned. An invisible quantity might be left somewhere about the "yard," and in some way come in contact with brood. Then, to follow the way adopted, another "grand illumination" must be had. True, it amounts to more or less "fussing" to eradicate foul brood; and I would need to "fuss" considerable to get another lot of hives, bees and fixings.

Foul brood can be eradicated by means of fermentative re-agents (antiseptics and disinfectants) which kill the organism that initiate the process of putrefaction, and the reason why these agents are efficacious is, either that the presence of the chemical re-agents prevents the development of further spores into a state of maturity, or else that they kill each organism as it is developed; the spores themselves are not necessarily killed by such re-agents, but immediately they develop into the matured state, they are destroyed.

Some of the re-agents, such as corrosive-sublimate, behave as direct poisons to the organisms, and yet others render the medium of the organisms unfit for their further existence and development, so that they die off in consequence.

In the practical employment of these re-agents, corrosive-sublimate is the most effectual, but it acts solely as a poison, and destroys vitality because it is excessively virulent. One part sublimate to 1,000 parts of water, is safe to use, and, if properly applied to foul brood (spraying the affected combs—all the combs in the hive, thoroughly) the foul is cooked. A stronger solution of sublimate is more effectual, and safe, perhaps.

There are several other re-agents less poisonous—carbolic acid, salicylic acid, and other anti-ferments. The re-agents should be put in contact with the foul or putrifying brood, and if applied to all the combs, all of the foul matter becomes killed, and the bees that chance to get virus on their feet or mandibles, will be likely to come in contact with the agent thus become harmless.

Some bee-keepers suppose that salicylic acid is given bees to swallow as a dose of medicine. If worker-bees should feed on honey or pollen charged with the fermentive virus, then they would void the brood-poison; but this seldom, if ever, occurs. Those who deal with foul or putrid brood, can use the re-agents that their judgment or fancy dictates.

Richford, N. Y.

BEE-KEEPING.

A Brief Glance at Its Past and Its Future.

Read at the Ohio State Convention

BY PRES. H. R. BOARDMAN.

I began bee-keeping in a very moderate way, and with hives and fixtures of a very crude pattern, and built up gradually and cautiously for many years before I considered myself anything like a specialist.

During all of the years that I was "feeling my way," as it were, buying new hives and supplies of every description that go to make and build up the apiary, I always insisted that the bees must pay their way each year, even in the poorest seasons. Even when I bought bees—which I sometimes did—it was with the expectation that the surplus from such colonies would pay back the purchase money at the end of the season.

Improvement in everything pertaining to bee-culture has kept pace with the inventions and improvements in the other industries. I have endeavored to keep well up with the times in the use of every useful invention or improvement for the apiary; and it would be only reasonable for me to expect my honey-production to keep pace with the means employed. But it is a little humiliating to have to "own up," that with all the useful help that ingenuity and invention have given us, my honey-yield has been diminishing each year, and this is the universal experience of Ohio bee-keepers. The result, of the three seasons previous to the last, could be fitly expressed thus: "Poor, poorer, poorest;" and the last season has culminated in failure, or very nearly so. This demonstrates clearer than any argument, that hives and fixtures, however ingenious or useful in their way, do not produce honey.

In view of the foregoing, let me ask the representatives of the bee-keeping industry of Ohio, What is the question that interests us as bee-keepers more than all others? Is it the style of hive that we shall use? The race of bees that we shall keep? Is it reversible hives, T supers, or thick top-bars? Is it bee-escapes, drone-traps, queen-cages, honey-boards, or bottom-boards? Is it all, or any, of these and a hundred and one other useful things? No! it is, How shall we be able to secure a crop of honey, or even a certainty of an increase in the yield? I think that you will agree with me that this is a question worth your consideration.

Once I thought that just the right style of hive would give me the key to success. I have worked out a hive that satisfies me in every respect. It has not increased, for me, the production of honey. I said, "Perhaps the yellow bees are the thing to make success complete." I procured a yellow queen from Sunny Italy, and filled my hives with yellow bees, and still my coffers were not filled.

Then the wintering problem came to the front, and I said: If I only could winter my bees successfully and certainly, I would surely be on the high road to fortune. The Increase of my colonies each year would enable me to increase and extend my apiaries all over northern Ohio, until they were numbered by hundreds, and the help I would employ would be as numerous as the workers in one of my colonies. This great system of apiaries should be known as—let me see—"Northern Ohio and Lake Erie Apiaries." I should have a special agent in all of our principal cities, whose exclusive business it would be to sell the best and choicest honey the world could produce, from the "Northern Ohio and Lake Erie Apiaries." I would be able to "fare sumptuously every day," and the banks would be plethoric with my lucre.

Successful wintering is, with me, no longer a problem. I have learned to winter my bees as successfully as I could desire, and yet my apiaries are not numbered by hundreds, nor are the banks plethoric with my lucre. But like the ever tempting waters around the thirst-tortured Tantalus, Fortune has kept provokingly just beyond my reach.

The notable changes affecting the honey-yield, are the destruction of the forest trees, by the advance of civilization—more especially the basswood and whitewood, or tulip trees—both prolific in nectar for the bees. This destruction, especially of the basswood, bee-keepers are thoughtlessly helping on, by the use of supplies made from that timber.

I do not feel warranted in attributing the shortage in the honey crop entirely to this cause, as there are always two conditions necessary during the season for honey-gathering, after we have got the workers ready for the field, viz: Abundance of honey-producing bloom, and favorable weather—and the most important is the weather, for with unfavorable weather, bees may, and indeed sometimes do, starve and die in the hives, while the breezes waft the fragrance of the nectar-laden flowers in at their "doors."

The most important conditions, then, the weather, is one over which we have no control. There is in the West, a vast domain where these two favorable conditions nearly always exist during the honey season, where almost perpetual sunshine and unbounded bloom combine to make it a "bee-keepers' paradise."

It is where artificial irrigation is substituted for the natural rainfall—where the alfalfa clover grows in luxuriance. I predict for those neglected desert plains, future possibilities for the bee-keeper yet undreamed of. In the not very far distant future, if I am not greatly mistaken, this land will literally "flow with milk and honey." To the young bee-keeper, with high aspirations, I would point to this vast and undeveloped domain, and repeat Horace Greeley's advice—"Go West, young man."

But as we are not all expected to accept this advice, we must turn our attention to the other necessary condition for honey-gathering—the flora—and strive to improve our honey-yield through its means alone, and take our chances with the weather. But as "Bee-Forage" is a special topic on the programme, I will only say, in conclusion, that I would recommend careful and patient experiment with the alfalfa clover by bee-keepers. It may yet find congenial soil in Ohio—it certainly grows in luxuriance much further North. We have, at all events, a very near relation of this clover, and equally as good for honey, I am certain—it grows luxuriantly on all kinds of soil, even on our hardest, poorest clay—it is the much-talked-of sweet clover. I am deeply interested in this plant. I have hopes of seeing farms devoted to its cultivation expressly for its honey, and with patient experience I should expect to see its luxuriant foliage finally turned into beef and the dairy products.

East Townsend, Ohio.

PAINTING HIVES.

Is Time and Material Wasted in Painting Bee-Hives?

Written for the American Bee Journal

BY W. L. BACKENSTO.

On account of sickness and bad weather I have not as yet made a start in bee-keeping, but I am still working to that end. But since the receipt of the BEE JOURNAL for March 29, I have been in somewhat of a quandary as to the advisability of painting my hives, as on page 217 Mr. C. Theilmann's experience of 15 years has convinced him that unpainted hives are the best; and now comes Prof. Cook, on page 260, who in a certain sense agrees with Mr. Theilmann. Now, if unpainted hives are the best, I do not wish to waste the time or material in painting my hives.

As regards the ventilation of hives, Mr. Theilmann's theory, which he says he has proven by 15 years' experience, may stand good in that altitude, where long cold winters and a great amount of rain prevail; but in an altitude like this of Colorado, where we have months of dry weather with scarcely a drop of rain, and the winters (except in the mountains) are not severe, but on the contrary very mild, I think that part of his argument in respect to ventilating hives is not applicable here.

In respect to the durability of hives painted, or not painted, I think that Mr. Theilmann must enjoy the pleasure of a nice, comfortable and commodious bee-house, where his hives have been in out of the weather for 15 years. Now I never had much experience in keeping bees, but I have seen a great many hives that other people kept bees in—some painted, and others not—those that were not painted, or that the original paint had all been worn off by the weather—and it always impressed me in a very forcible manner, that the owner was not fully up to his business, or was careless, and was losing money by not keeping his hives thoroughly painted. I formed my conclusions from these facts—I noticed that the unpainted hives were full of season-checks (or cracks), that the corners of the hives were pulled apart, and, in a great many cases, the boards were warped, and where they were not, they were falling out.

As I understand it, the bees stop up all the cracks and open places in the hive that they can get at, with propolis; and as it takes time to collect the propolis, and more time to apply it to the damaged places in the bee's home, when, if the bees so employed would very probably, if collecting honey, gather enough to more than pay for keeping the hives painted, after once being painted, to say nothing about portions of the hives having to be replaced, having become so full of cracks, and so badly warped as to be of no further use.

I write this for information, more than anything else, and I hope to see more on the subject in the BEE JOURNAL, from practical bee-keepers.

Denver, Colo., April 24, 1890.

BEE-CULTURE,

Will It Pay?—The Terrible Kentucky Cyclone.

Written for the American Bee Journal

BY G. W. DEMAREE.

How often this question has been discussed, I could not venture to say, but I have seldom seen it discussed in print in its proper sphere and under proper comparison.

Bee-culture is a branch of agriculture; it is a rural pursuit, and in computing profits, the comparison must be drawn between it and kindred pursuits. The matter of capital and all *risks* must be considered. Looking at the matter in this light—its legitimate light—I say, without any hesitation, *bee-culture pays.*

Do some men fail to make bee-culture pay? Certainly they do, and quite a "some" of them fail, and would fail at almost anything else. Some men lack energy, and fail for want of "push;" they are slow, and let the opportunities slip. Others are visionary, and push their business to destruction. But the man or woman who is willing to study, work and wait, can and will succeed.

Bee-culture is not a royal highway to wealth—all who immagine such a thing, will be disappointed. It comes under that class of industries that only bring a comfortable living. Cast about you and see how many hundreds of families barely make a support. A little sickness, a little drouth, a little mishap, brings them to want. When you stand here and ask, "Does bee-culture pay?" the answer is "Yes;" but if you stand in "Wall Street," in the banking house, in the halls of merchandise, or if you walk in the great farming districts where great farm-houses are to be seen surrounded by broad acres of waving grain, and sleek cattle browsing the grass-carpeted fields beside pools of cool waters, the vision pales, and bee-culture dwindles to a *little* business.

We must judge everything from a proper stand-point, if we would arrive at proper conclusions. To make bee-culture pay, we must learn the business, and we must learn to be economists; good, plain hives and fixtures, as cheap as is consistent with utility, with as little expense as possible consistent with ready supplies, which means avoid all expensive patent hives and patent devices that are untried, or that promise nothing for the extra price set on them. Good fixtures and plenty of supplies to meet all the needs of the apiary, will always pay; but the apiarist who fails to judge rightly in this respect, will fail in the end.

NEW BEE-DEVICES—EXCLUDERS.

Move cautiously here. I tried a few perforated queen-excluders at the start, and learned how to manipulate them; then I added more of them, till I have a supply, and yet they are not used indiscriminately in my apiary. To use them profitably, they should not be used blindly, but used only where needed, and when needed. I have not the space here to point out how and when to use the excluders to the best advantage—a little experiment will aid the apiarist to use the excluders to the best advantage; I only add here that the best and cheapest excluder is a plain sheet of perforated-zinc, framed with wood. The wood-and-zinc excluder is clumsy, and nearly impossible to keep clean, besides it costs more than the full-sheet excluder.

THE SWARM-HIVER.

This is not as new a device as some seem to think, but this matters not—Will it work? is the great question. I have experimented largely in the past with swarms, and the tendency of the swarm to return to the old hive has been so strongly marked that I am prepared in advance to say that the "swarm-hiver" will never be automatic in its performance. Only a part of the swarm will go into the new hive with the queen; and if the old hive must be opened, and the swarm replenished therefrom, nothing will be gained over the clipped-wing plan.

THE BEE-ESCAPE.

Perhaps I am the "daddy" of the bee-escape, though no doubt some will be ready to smile at the hint. By referring to page 333, of the AMERICAN BEE JOURNAL for 1881, it will be seen that I exhibited a bee-escape at the National Convention held at Lexington, Ky., in 1881. The committee does not call it a "bee-escape," but the model had "Bee-Escape" printed on it. I still have the model in my collection of bee-traps.

John S. Reese, however, first applied the device to the inside of the hive. Mr. Reese and myself have been in communication with each other for several years, and the first I ever heard of the application of the device to the inside of the hive was in a communication from Mr. Reese. He sent me a model at first of his cone device, and afterwards of his horizontal device.

Well, now, I have experimented as largely with bee-escapes as any other bee-beeper, having used them in every conceivable form as an outlet to my "dark closet," and also in the hive, since Mr. Reese made the suggestion to me, and in my opinion the horizontal device will never work reliably, as does the perpendicular device. Bees do not move as promptly in the dark through a horizontal pass-way as they do in a perpendicular direction. Time will show if I am right in thus concluding.

THE GREAT CYCLONE IN KENTUCKY.

Though grand and appalling outside of the cyclone, on March 27, it did no great damage except to fences and other light structures. My apiary was not injured, though it looked considerably wrecked. Many of the hives were unroofed, but the bee-glue held the upper stories in place. How is that for square-joint hives?

The cyclone passed west of this place, but it was quite near enough to send out a terrific sound like great freight-trains running at full speed in the upper regions. From where I stood, I could see the cyclone battling with the opposing forces as it would swing down in the form of an inverted cone, from the great storm-cloud, filling the upper regions with a hollow, unearthly, indescribable sound. Night had just clothed the earth in darkness, and the electric display beggars all description. All Nature seemed to vomit fire, and the heavens and the earth blazed incessantly till no mortal eye could bear the sight.

Whenever the whirling monster touched the earth, nothing could withstand its force. My friend and countryman, Mr. Ed. Drane, has already reported (see pages 253 and 275) the damage done to the fine Drane bluegrass farm; but he has told the story with characteristic modesty. In fact, the wreck was indescribable.

Christiansburg, Ky.

BEE-IMPLEMENTS.

Hives, Supers, Extractors, Scales, Hiving-Basket, etc.

Read at the Newaygo Co., Mich., Convention

BY WM. E. GOULD.

The purpose of this essay is to describe the hive and implements which I use and prefer. One of the first questions to confront the beginner in bee-keeping is, Which is the best hive for all purposes?

In a climate like ours, I prefer the chaff hive and out-door wintering. Right here allow me to state, that in all my experience as a bee-keeper, I have lost only one colony in wintering. I believe that 2 inches of good chaff all around the brood-nest is sufficient. Wheat chaff, or straw that has been cut up short, is the best packing. The brood-chamber should be 12⅜ inches wide, and contain 9 Langstroth frames. In the 8-frame hive the brood-chamber should be 11 inches wide.

Now why should we use the Langstroth frame? I have used a different frame in a few hives which, on some accounts, I prefer to the Langstroth frame; but I shall use the Langstroth frame because it is the "standard." Ten Langstroth frames are used to one of any other size.

In the past I have made hives and roofed them with narrow ship-lapped slats. These soon leaked. Then I tried ship-lapped siding with the pitch of the roof steeper. This worked better. When the siding was of good quality, and the roof well painted, it did not leak. But in the future I shall use tin for roofing. It costs much more, but it makes a water-proof roof. Were I to use a single-walled hive, I should prefer the dovetailed hive, in connection with the T-super.

SUPERS FOR HONEY.

I have used several styles of section-cases. The one that I prefer is what is known as the "T-super." The inside measurement of this should be 4⅝x12⅜x17⅜ inches. I prefer the bee-space to be at the top. For a cover, I use a thin board cleated at the ends. This super will accommodate 2-inch sections with separators, or the 1¾-inch sections without separators. Separators should be used with sections that are more than 1¾ inches wide. I prefer to use the I¾-inch sections without separators. Almost any size of sections may be used.

I would not advise any one to use more than one width. Sections should be removed *en masse.* To do this, invert the super, loosen the sections from the side of the crate with a thin-bladed knife, and the super can be easily lifted from the sections. I use the tins both above and below.

The super for extracted honey should contain I2 Langstroth frames, spaced 1½ inches from center to center. There is much discussion in regard to the use of a honey-board between the brood-nest and the extracting super; I seldom use one. The presence of a little brood in the combs need not interfere with extracting, while I think its presence encourages the bees; but if a honey-board is used, there is no danger of losing the queen when extracting.

I should always use a honey-board between the brood-nest and the section-cases. I prefer the slatted queen-excluding honey-board. I like the sheet-zinc "board," but it should be bound with wood, so as to give the proper bee-spaces.

THE HONEY EXTRACTOR AND KNIFE.

There should be room enough below the revolving basket for at least I00 pounds of honey. With the extractor we should have a good uncapping-can—so constructed that the caps fall on a wire screen, and all the honey is drained from them. Enough honey will be saved in this way in an ordinary season to pay for the can, and the honey is the best quality, too.

The Bingham honey-knife has no equal. When extracting, it is a good plan to keep a dish filled with warm water where the knife can be kept in it when not in use. A warm knife will take off the caps without tearing down the cells; especially is this a help in cool weather.

THE SOLAR WAX-EXTRACTOR.

As fast as the wax accumulates, I place it in the solar wax-extractor, and the heat of the sun soon converts it into a marketable shape. Perhaps I should explain that the extractor is covered with glass, and a bright tin reflector is so placed as to throw the rays of the sun upon the glass. The interior of the extractor may, in this way, be heated above the boiling-point. But so much heat should not be used in rendering wax. Wax rendered by the solar wax-extractor is more salable, and will bring several cents per pound more than wax that is rendered by artificial heat.

STORING EXTRACED HONEY—SCALES.

For storing extracted honey, I use a large extractor-can. This has a honey-guage, and is very convenient when filling glass receptacles, in fact when filling any small glass receptacles. Lard cans, which can be got at any grocery, are very good and cheap for storing honey in. They are not convenient for filling smaller receptacles.

Every bee-keeper should have a pair of accurate scales. I would recommend those that weigh over 250 pounds, and that have a beam for taking off the tare.

Every bee-keeper should have a hand-pump which can be used in a common pail. By its use in swarming time, each swarm can be driven where you wish it to alight.

A SWARM-HIVING BASKET.

For taking down swarms from the tree, I use a bushel basket which is nailed on the top of a ten-foot pole. Most of my swarms alight in apple-trees, and I can take them down while standing on the ground. I have another pole of the same length, with an iron hook fastened on one end. I stand the basket so as to be in under the cluster, and with the other pole I shake the bees into the basket. As soon as they are quiet, I carry them to the hive that I wish them to enter, and shake them on a paper which I have spread before the hive. Usually they enter readily.

CARNIOLANS.

Best Race of Bees for the Sierra Nevada Mountains.

Written for the American Bee Journal

BY S. L. WATKINS.

After the past very hard winter, a great many bees have been lost in the northern counties of California, especially the counties where the snow fell to a depth of 15 or 20 feet.

Where Carniolan bees were kept, they wintered splendidly, thus proving the hardiness of this race, especially where long confinement was necessary. They seem to be the best adapted to this climate. Their quietness in winter is a good point in their favor.

Some bee-keepers claim that their swarming propensities are a serious drawback against this race; others, that as soon as the queen is gone, laying workers immediately take possession. I have had considerable experience with this race of bees—have bought queens from some of the best breeders in America, and they all turned out well. I can build up a Carniolan colony larger, and keep it so, better than I can an Italian colony. As regards laying workers, I have not been troubled with them, and I reared in the neighborhood of 300 queens, too, from this race.

Below is an extract from a letter written on April 15, that I received from G. W. Cover, of Downieville, Calif.—a man whose opinion in bee-culture I value highly. He is situated in a location where the snow sometimes falls to a great depth. The following is his letter:

> The snow here fell to a great depth, altogether, I suppose about 60 feet; we measured until there was 56 feet, and then we got tired and quit. Well, the poor bees were out in it all, as I winter mine on the summer stands. We shoveled snow until we had no place to throw it, and finally the bees were covered over entirely, and we never saw them again until the first of March—without a flight-spell for 90 days. When the snow began to settle, I went around with a long pole, and poked it down, and would strike a hive once in awhile, so I got a little air to them until I could get them out.
>
> On March 1, we resurrected them, and found about two-thirds of them alive; but in such a damaged and wet condition that they dwindled down to 12 colonies out of 54. I lost every Italian colony, while every Carniolan colony came out bright and strong, and are living and doing well now. I think that the Carniolan is the bee for the mountains. I want no more Italians.
>
> The country is still covered with snow, and will not be gone for a month yet. The bees are coming in with pollen from the cedars, alders, willows, etc.
>
> G. W. COVER.

The reader must not infer that there was 60 feet of snow at one time—60 feet for the winter, so far, and possibly 25 feet at one time. In these high altitudes, the snow falls to a great depth, and now that it is beginning to melt, the creeks and rivers are overflowing with water. This has been the hardest winter ever known in this part of California.

Bees are at present working on California lilac, manzanita, alfilaree, etc. We have had no swarms yet. The season is considerably later than usual.

Grizzly Flats, Calif., April 20, 1890.

HONEY.

Do Bees Make Honey?—Fruits in California.

Written for the American Bee Journal

BY D. B. WIER.

I have been very much interested in the discussion of this question from time to time in the BEE JOURNAL. The majority of the bee men and women hold that the bees do not make honey, that they simply gather the sweets from flowers and other sources, where it has been elaborated by the occult hand of Nature; but all seem to have left out a good many interesting points—more interesting, though, from a scientific point of view than a practical one. One that has a considerable practical bearing is, How do bees reduce the surplusage of water in the sweets that they gather? The majority seems to think that bees cannot do this. In this, I think, that they are wrong.

I have seen bees feeding in swarms on the sugar-water as it run from maple-trees. Would these persons hold that the bees stored this diluted sugar-water as they gathered it, in the hive? Though I do not see or understand any way in which the bees could reduce the proportion of water to the sweet in a liquid, we should remember that there are many manipulations and changes of form in matter performed by the action of life, that we can neither understand nor perform mechanically, or chemically.

I think that the idea that the honey-sac of the bee is simply a sac merely to carry with, having no functions (like the basket one carries on his arm to put the fruit in when he is gathering apples), is all wrong. I believe it has offices—functions—and one of them is to reduce the amount of water in nectar or other sweets which are being gathered; and while they are carrying it to their home.

As before stated in this bee-paper, I am not an apiarist, but I consider myself an expert in finding bees in the woods, and while engaged in this (to me) most pleasant pastime and sport, I have often noticed that when bees are working on flowers with quite watery nectar (the *compositæ* late in autumn), that so soon as they had gathered their load, and after flying a few feet, they evacuated a clear liquid, invariably. This can be plainly seen in the evening, by looking toward the setting sun; this liquid seemed to be clear water, with no perceptible sweet taste.

Again, when baiting bees with clear honey, they would fill themselves with it, and fly directly away, without evacuating; but when using honey diluted largely with water, or with thin sugar-water, they would do it every time. They would take up their load in one-fourth to one-eighth of the time, if the food was largely diluted, that they would if it was thick honey. They seemed to have to dilute heavy honey, like a fly does sugar, before they could swallow it.

It is true that I have found very diluted honey that had been stored late in the autumn, but the evidence was in some cases good, that this was gathered from scattered honey, and from that alone. Here is the proof:

I cut a large bee-tree with a great amount of honey; the tree in falling was badly smashed, and a great amount of honey wasted. I did not kill the bees—they clustered, and went to work. It was late in autumn—flowers all gone; they had two weeks of fine warm weather in which to work, and they gathered a few pounds of the scattered honey, and stored it. I robbed them, and found the honey very thin. While they were working it I watched them carefully, and supposed I got a good "line" for another tree, but when I traced it up, it was simply a "line" to water. Here were these bees "making honey" from honey, and it was as thin as any gathered at that season of the year from flowers or "maple sap." I could give other instances showing the same facts.

I think that "some of the boys" are a little "off" on honey flowers. I had fixed this point up in this way:

Honey always has two distinct flavors—one given it by the scent peculiar to the honey-bee's personality, the same as beef tastes like the ox smells, and mutton like the sheep smells, etc.; this odor seems to be a combination of the scents from the intestinal canal, the exuviæ and exudations from the skin; and, in the case of the bee, while the bee has it in her possession, she adds to it a minute quantity of formic acid.

The other flavor is given to the honey by the source of the nectar; or, in other words, if one fed bees on pure sugar syrup, it would, so soon as deposited, taste and smell like honey, and its sweet would be changed from cane-sugar to grape-sugar, no more to to be changed back by any process known to us, to crystallizable cane-sugar again. Therefore, I maintain with Prof. Cook, that bees both *gather* and *make* honey.*

CALIFORNIA FRUITS AND RAISINS.

Here in California, since the long dreary period of heavy rains closed, bees have had a glorious time of it. The whole face of the country, valley, hill and mountain is carpeted with flowers—such beautiful and fragrant flowers. In Illinois, we had but about a dozen wild flowers that were first-class for beauty, but here there are hundreds.

The season, though 10 to 15 days late, is well advanced. Strawberries and cherries are freely in market; blackberries and raspberries are in full bloom.

The fruit crop promises to be large and fine, of all fruits except apricots.

Of these, the great majority of the trees are dead—killed by 6 months of excessive wet. About once in 10 or 12 years we have an excessively wet winter, long drawn out; this constant soaking of top and root is more than some species of trees can stand. The apricot suffers worst of all. This is an immense loss to the fruit-growers of the State, for they had a perfect monopoly of apricot fruit.

The loss of young peach, prune, almond, plum, and cherry trees has also been immense, on all lands without perfect natural under-drainings. This will add greatly to the *boom* for lands in the arid districts, like the San Joaquin valley, where they have from 2½ to 10 inches of rain a year—where they bring their rain from the mountains in canals, and use it only as they need it. That seems to be the right kind of rain to have on top, especially when the soil is about the richest and most perfect known in the world.

The raisin industry in the arid valleys is assuming giant proportions. It is one of the simplest crops to grow, most certain, and one of the most profitable crops grown in California. The great Southern Pacific railroad, and other large land-holders, are preparing to offer people most liberal inducements to form colonies for the production of raisins in the rich valleys of Kern county—the best raisin climate and soil in the world. These inducements are such—are *real*—and more liberal in their terms than any great land syndicate ever offered to people before. I am in a position to send inquirers full particulars. There, in the foot-hills and mountains surrounding Kern county, is the ideal place for apiaries.

Petaluma, Calif., April 29, 1890.

[*That bees mix water with honey for various purposes is a well-established fact, but that does not prove that they "make honey." The two combined make a syrup—but mixing water and honey no more proves that the bees *make* the honey than it does that they *make* the water! It is a misnomer! Bees do *not* "make honey"—they simply *gather* what Nature has already made! No amount of sophistry will prove to the contrary!

Under certain circumstances bees will feed on grape-juice, the so-called honey-dew, or even on commercial glucose, when nothing else is available. They *may* mix these articles with the honey already in the cells, but that does not "make honey" out of either the glucose, the honey-dew, or the grape-juice—even though the bees did the "mixing." If honey-dew is gathered—insect-juice is deposited in the cells, and that only—it does not make honey!—Ed.]

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 17.—Darke Co. Union, at Greenville, O.
J. A. Roe, Sec., Union City, Ind.

May 17.—Haldimand, at Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

May 20.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Good Honey Season Expected.

My bees are booming at this time. I lost 4 colonies out of 62, which leaves me 58. The prospects for a good honey season are very flattering now. White clover is coming along. I hope to get a good crop of honey this year. S. Burton.

Eureka, Ills., May 1, 1890.

Golden-Rod—Backward Spring.

I am still alive and able to make my best bow. Although badly used up by the many severe drubbings received from the correspondents of the Bee Journal, who are the friends of "golden-rod." I thank them for their criticisms, and hope that they (as well as myself) have been benefitted by the exchange of ideas. I admire their pluck in defense of their pet, and they remind me of a colony of Italian bees defending their stores from robbing neighbors. I only gave it as my own belief, from personal observation and that of our neighbors, and had no idea of accusing people of dishonesty, when they said that golden-rod produced honey. I had not seen it with bees about it, and was only going on the plan of "seeing is believing." I make my best bow, raise my hand, and say "So mote it be"—at least, until we receive more light.

Bee-keepers seem to have fared badly in this part of the country (southern Illinois), as the fine spring weather in December and January produced brood in quantity, and stores were exhausted before bee-keepers knew it; some have lost most of their bees in this manner, not dreaming that they were short of supplies. I have saved all of mine by feeding when others thought it useless. The extremely wet and backward spring has produced very little nectar from any of the bloom, and, in fact, there was little but apple-bloom for them to work on; and while it was in bloom, it was raining nearly all the time, so that was almost a failure. The prospect for white clover was never better than at the present time, and it has just begun to bloom. We hope to be able to report a good yield from this and other blooms. Ira Reeves.

Carmi, Ills., April 30, 1890.

[We are glad to note that our suggestion was correct—on page 106, in reply to the letter by Mr. Purvis—that Major-General Reeves "*could not* mean to record anything more than the observations of himself and his neighbors *in that locality*," regarding the yielding of nectar by golden-rod, as stated in his first letter on page 58. "All's well that ends well."—Ed.]

Early Honey-Flow in Minnesota.

If I am not greatly mistaken, the reader will soon hear reports of a honey-flow in April in Minnesota. Last year we were feeding our bees up to June 1—now, every tree with a bud or tag or tassel is swarming with bees, and the brood-chambers are filled with a dark honey that I felt sure was stored this spring. I heard yesterday from a hundred-colony apiarist, and he reports his bees storing lots of honey from cottonwood, which is the only tree near his prairie apiary. My bees have had soft maple, poplar, elm, and now cottonwood and pussy-willow. Last year I did not see a bee on an apple-blossom or wild plum—on nothing until we had box-elder and white willow. Now the apple and plum are crowded with buds. A neighbor who made sugar from the maples this spring, reported an unusual flow of sap. I wondered if that was what ailed all the trees. May the good work go on, until the linden bloom shall respond likewise. I hope that the same condition of things extends all over the State, and that every bee-keeper in the State has enjoyed the busy hum of the bees every day for ten days, as I have. My bees have lost but one entire day since I took them out of the cellar, which was on April 10. Mrs. B. J. Livingston.

Center Chain, Minn., April 28, 1890.

A Comment on Bee-Escapes.

It would seem to be unanimously decided by the correspondents of the American Bee Journal, that in the bee-escapes published the past winter, they had found success in removing the bees from the section-cases—in fact, perhaps they have, but it would seem to me very much like a man, who, finding his house full of thieves, would simply bolt all his doors lest more should enter, but allow all those in to depart unmolested with all they could carry. The bees would not only carry away considerable honey, but do more damage by uncapping honey. We want, and do have, the bees to depart at once when we go for the honey—they must not stop to make reply, nor take any honey with them, either, but "get up and get." If the escapes could be placed on the hives without disturbing the bees, they would be all right. Chas. B. Fritts.

Niles, Mich., April 30, 1890.

Good Prospects for Clover.

Bees are doing well, working on fruit-bloom at present. Prospects for clover are very good. Bees wintered well, but used a great deal of honey; I had to feed some. My loss was 5 colonies out of 108. D. W. McDaniel.

Hamilton, Ills., May 1, 1890.

Colonies Swarming Out.

I have been keeping bees for 8 years. In the autumn of 1888, I had 50 colonies, which I put into a house cellar, as usual. Towards spring they got very uneasy, and a great many left the hives, so I took them out quite early in the spring, when I noticed that the comb was somewhat moldy. The first warm day following, 32 colonies of them swarmed out, and all clustered on one bunch on a fence-post, and several others left their hives to join in with another. All effort to separate them from the post, to put them back into their hives, or into some other, was in vain, for they would come out the same as before, to remain there and perish during the cold night. Have any readers of the Bee Journal had a like trouble? Will some of the bee-specialists give advice through the Bee Journal, as to what I should have done to save the bees? G. D. Heuring.

St. Michael, Minn., April 29, 1890.

Flattering Prospects.

Bees wintered well in this locality. Mine wintered in the bee-house without loss, although 2 colonies were weak, which I united. Yesterday I noticed drones flying, and on opening the hives I found, to my surprise, that some colonies had new queen-cells ready for the queen to deposit her eggs. I look for some early swarms. Just now the bees are working on the cherry and apple blossoms, and if the weather continues favorable, the bees will make things lively in the apiary. A few days more, and Nature will be clothed in her best. Everything looks very flattering for a good honey year.

Just now I am employed in painting my new bee-hives; when completed, they will be "dandies." They are two-story Simplicity hives, painted white, with the ends of the covers painted scarlet, and the front and rear sides of the brood-chamber painted light blue, the second story remaining white. This gives the hive the national colors—red, white and blue, on the front and rear sides, and when placed in the apiary, gives it a very fine appearance.

I am contemplating sowing some Japanese buckwheat, and as I have never raised any buckwheat, I would like to ask the experienced through the Bee Journal, how much they sow to the acre, and when is the best time to sow it, both for harvest and for honey. Will some one who is successful, please answer through the Bee Journal? Geo. Frey.

Geneseo, Ills., May 1, 1890.

Nebraska Bee-Keeping.

For the past month, bees have been doing finely. I began the winter with 97 colonies in good condition, on the summer stands, in Langstroth hives, and lost 10 during the winter and spring, caused by too early breeding in the warm weather in January, which consumed a great deal of honey; then it turned cold, and bees starved for want of food in reach of them. Just now they are, and for the past week have been, booming on wild plums and cherries. Gooseberries and strawberries will soon be out for them; the apple-trees are also covered with fine bloom, and prospects are good for a crop of nice fruit of all kinds, and the way the farmers are improving the time in spring work, looks fair for large crops the coming season; but just now we need rain badly, which would also improve the honey-yield. Mr. E. A. Wells reports the first swarm of bees in April, for this locality.

I have been able to dispose of all of my honey in my home market, and more, too, for I had to buy to supply the demand; still I always keep a little on hand to fall back on, should I need it. I shall work mostly for extracted honey, as I can sell so much more of it. I sell mostly at 10 cents per pound. I just take a barrel in the wagon, and stop at every house, and soon dispose of a barrel of honey at that price. Then I always have the honey ripe when selling it, and guarantee it to be good, and pure honey. I have principally the Italian bees, though my best honey-gatherers are hybrids. One colony stored 250 pounds of surplus honey last season.

In regard to the Carniolan bees, I have failed to see their good qualities as yet. The first queen that I had, proved to be a drone-layer; this the dealer generously replaced with another, but I hardly think it is pure, as a good many bees in the hive resemble the Italians, still most of them are black or gray banded, but they are not half so docile to handle as the Italians; and when I lift the cover or cloth, they are all astir, and I have failed to ever look at them, or remove a frame from the hive, and not get stung. They remind me of a hornet—they make a bee-line for the face and eyes, and are generally "sure shot." For my part, I like the albino strain of the Italians. I expect a fair crop of honey this year. R. R. Ryan.

Bradshaw, Nebr., May 1, 1890.

Bees Have Wintered Well.

Bees have wintered well, as far as I have heard. I lost but one colony, and that was a late swarm. There was but very little surplus taken here, as there was no basswood bloom, and white clover did not seem to secrete much nectar; but the bees gathered enough from golden-rod to winter on. R. A. Rummel.

Butler, Ind., May 1, 1890.

Favorable Weather for Bees.

On Nov. 26, 1889, we put 112 colonies of bees into the cellar, and it was very mild and warm all winter, the temperature having been the highest that we ever saw, and we feared bad results; but we removed 109 colonies on April 12, and they are the strongest and the most even colonies that we ever had. On May 1 there were some spotted hives, but not to any extent, and not any since their removal from the cellar. So far the weather has been quite favorable for them, and they are at work on soft maples, willows and dandelions, and they seem to be as far advanced as at the first of June last spring. It promises a good honey season now. White clover looks well, and there is an abundance of Alsike sowed by the farmers here, and we hope for good results from our bees this season; at any rate, we will take our chances with the farmers. So far it has been wet here, and some are predicting a drouth later. I would like to hear from more bee-keepers who winter their bees in cellars. Mrs. Emma Hulett.

South Dayton, N. Y., May 5, 1890.

Convention Notices.

☞ The Darke Co. Union Bee-Keepers' Society, will hold a basket meeting on the Fair Grounds at Greenville, Ohio, on Saturday, May 17, 1890.
J. A. Roe, *Sec.*

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. Lyles, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. Fuller, *Sec.*

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our Journal at $1.85 for the two; or with both our Home Journal and Bee Journal for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the Bee Journal to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the American Bee Journal or Illustrated Home Journal for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

SUMMER, 1890.
ILLUSTRATED
CATALOGUE
OF
BEE-KEEPERS'
SUPPLIES

FOR SALE BY

THOMAS G. NEWMAN & SON,

246 East Madison St., Chicago, Ill.

Our Annual Catalogue and Price-List is herein presented to our patrons, and we would especially invite a careful perusal of it before ordering supplies for the apiary. As this Catalogue contains illustrations and descriptions of many of the articles enumerated, as well as prices, purchasers can easily *select* such as they desire, and compute the entire cost of the goods ordered. Please remember that goods offered at *low prices* are often *dear*, because they are generally proportionately *inferior*.—"*Excellence is Cheapness.*"

Your full address, plainly written, is very essential in order to avoid mistakes and delays.

How Goods are to be sent, should be distinctly stated. Anything to be shipped by freight should be ordered from 10 to 30 days before needed for use, according to the distance from Chicago. Express charges are high on long distances, and heavy goods should not be sent by Express, unless particularly needed for use at once.

We Pay Postage on all articles quoted by mail. All others are to be sent by express or freight, at the purchasers' expense.

Goods will be sent C.O.D. only when sufficient money is received with the order to pay charges both ways, in case they are not taken from the express office by the person ordering them.

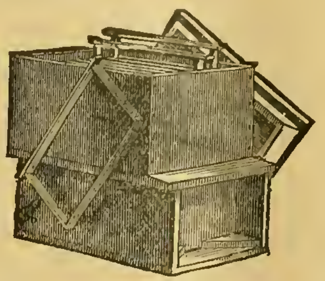
Remit by Express Money Order, Registered Letter, or Bank Draft on Chicago or New York, payable to Thos. G. Newman & Son. *Checks on local Banks* cost us 25 cents for collection, and if you send such, add that amount, or we shall deduct it from your order.

If Goods are damaged or not such as were ordered, *do not return them*, but write to us, and we will direct how to dispose of them.

Credit.—We sell on *small* margins, and cannot afford to take the risk of selling on Credit. If we did a credit business, we should be obliged to add from 10 to 20 per cent. to our present prices, to make up for those who never pay, and for clerk-hire to keep books, etc.—this we know our cash customers would not think to their advantage. In order not to do injustice to any one, we make this an **invariable rule**—*therefore do not ask us for credit.* This system gives all the advantage to "cash customers," but the "credit system" works to their injury. We therefore always require *Cash with the Order.*

STANDARD LANGSTROTH BEE HIVE.

(14x18⅜ inches inside.)



SAMPLE HIVES—*Nailed, not painted.*

No. 1.	—Brood chamber with portico, 10 frames, 7½ inch cap, but no surplus arrangement	$1 25
No. 2.	—Same as No. 1, with the Comb Honey Rack complete	2 00
No. 3.	—Same as No. 2, with an additional story containing 10 extra frames for extracting, interchangable with those in the brood chamber—a complete 3 story hive	2 50
No. 4.	—Brood chamber with portico, 10 frames, and a 7 inch story, with 7 cases containing 21 Prize Boxes, and tin separators, for surplus honey, with a 2 inch cap	2 25
No. 5.	—Same as No. 4, with an additional story containing 10 extra frames for extracting, a complete 3 story hive	2 50
No. 6.	—A complete 2 story hive containing 20 interchangeable frames, with a close-fitting—2 inch—cap	1 75
No. 7.	—Same as No. 6, with the second story containing seven cases holding eight one-pound sections each (56 in all), and two tin separators attached to each case, complete	2 85
No. 8.	—A 3 story hive containing 20 interchangeable frames and seven cases, as described in No. 7	3 25
No. 9.	—Brood-chamber with portico, 10 frames, and Heddon's surplus arrangement, containing 32 one-pound sections	2 00

All Langstroth hives have metal rabbets for the frames to rest on.

Material for Langstroth Hives, in the Flat, Ready to Nail.

Numbers	1	2	3	4	5	6	7	8	9
5 or more,	80c	$1.10	$1.40	$1.40	$1.70	$1.10	$1.50	$1.80	$1.10
10 or more,	78c	1.08	1.38	1.38	1.68	1.08	1.48	1.78	1.08
25 or more,	75c	1.05	1.35	1.35	1.65	1.05	1.45	1.75	1.05
50 or more,	73c	1.03	1.33	1.33	1.63	1.03	1.43	1.73	1.03
100 or more,	70c	1.00	1.30	1.30	1.60	1.00	1.40	1.70	1.00

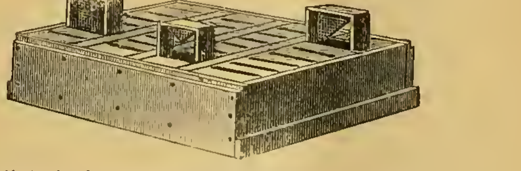
☞ The top and bottom-boards, on all the Hives, are in one piece.

☞ We make Hives Nos. 4 and 5 to contain 28 one-pound Sections, at the same prices, when so ordered.

THE HEDDON SURPLUS-CASE,

As Used on Our Langstroth Hive, No. 9.

is designed for obtaining honey in the comb, without the use of separators. The sections for this arrangement are 1¾ inches wide, and will hold just the same quantity of honey as the 2-inch sections when separators are used. In the absence of separators, of course the sections should be filled with comb foundation, in order to secure straight combs, and such as may be packed in the crates for marketing without interfering with one another.



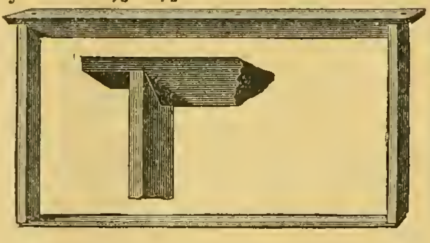
As these "stories" are arranged with a ⅜-inch space over the sections, they may be "tiered up" when desired.

For those who wish to "tier up," or to get extra "stories" of the above, we will furnish the material, ready to nail, of either kind, with the full number of sections, at 45 cents each; or the same nailed, all ready to go on the hive, at 65 cents each.

☞ Also with T-Tins, at the same prices, when so ordered. ☜

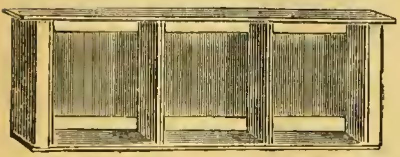
MATERIAL FOR LANGSTROTH FRAMES.

Ready to nail—9⅛x17⅝ outside.



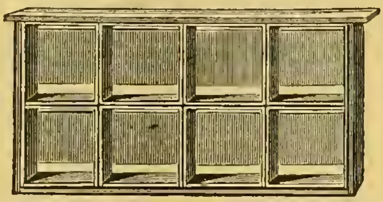
100 frames...	$ 1 10
1,000 frames....	10 00
Bored for wiring, having flat top-bars, per 100...	$ 1 65
Bored for wiring, having flat top-bars, per 1,000.	$16 00

WIDE FRAMES FOR TWO-POUND SECTIONS.



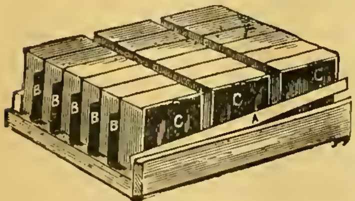
Material for wide frame, to hold 3 2-lb. sections, on Langstroth hive, per 100,	$2 00
Tin Separators to fit these wide frames, per 100	2 50

WIDE FRAMES FOR ONE-POUND SECTIONS.



Material for wide frames, to hold 8 one-pound sections, on Langstroth hive, (same size as the brood frames,) per 100..	$1 50
Tin Separators to fit these wide frames, per 100.................	2 00
Sample frame, with boxes and separators,.......................	25
The same, sent by mail, postpaid..............................	75

Comb Honey Rack.



The engraving shows the Comb Honey Rack as used on the Langstroth hives Nos. 2 and 3. It contains eighteen 2-lb. sections, with the outside ones (C) glassed; 5 tin separators (B), and the wedge (A) to tighten or loosen the sections for manipulation.

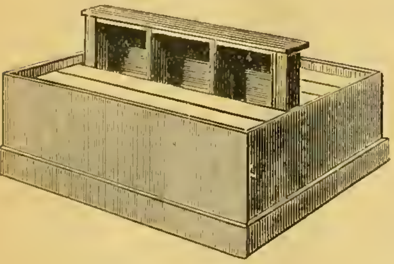
We also make these Racks to fit any hive.

In ordering a special size, give only the width of your hive inside, and the length of the top-bar of your frames.

Sample Rack, by express, nailed, without sections.....$	25
Sample Rack, nailed, with sections, separators and glass, complete, by express, crated.................	75
Material for Rack, without sections, by mail...........	75
" 12 Racks, ready to nail......................	1 25
" 25 " " "	2 50
" 50 " " "	4 50
Tin Separators for this Rack, per 100.............	2 50

☞ Sections 5¼x6¼ can be used in both of these surplus stories.

Surplus Story for Comb Honey.

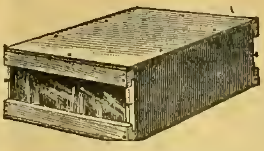


The engraving shows the 7-inch story as used on the Langstroth hives Nos. 4 and 5 (with one Wide Frame raised up), showing the 3 2-pound sections, with a tin separator fastened to the back of the wide frame.

The upper stories of Nos. 7 and 8 are the same style as shown here; the wide frames holding 8 1-lb. sections, instead of 3 of the 2-lbs.

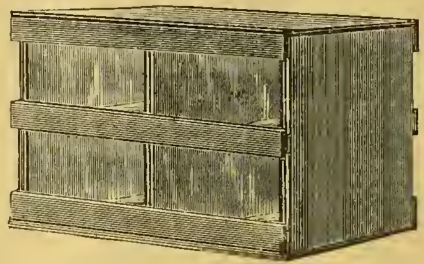
We also make this story for Nos. 4 and 5—each wide frame holding one row of four 1-lb. sections—at the same price.

SHIPPING CRATES FOR COMB HONEY.



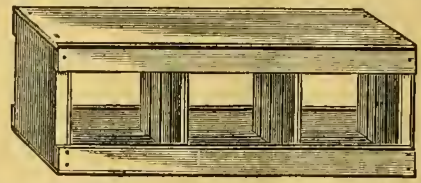
Sample Crate, nailed, containing 12 sections, without glass, by express ....$	40
Material, ready to nail, 50 Crates.	3 75
" " 100 Crates.	6 50
Glass for these Crates, per 100 lights	1 00

The Crate shown above holds **twelve one-pound Sections**, with glass on the end instead of the side, taking smaller glass, and less work on the wood parts. The inside measure is just 12 inches long; carrying 2 rows of sections of either width, 6 to the foot or 7 to the foot. Those using both widths of sections will not require two kinds of crates.



The above Crate holds **twenty-four one-pound Sections** 2 inches wide; (or, sections 1¾ inches wide, if so ordered.) The side cleats are grooved for glass; and the gross weight will not exceed 28 pounds. As the markets now demand small packages, this size of crate gives excellent satisfaction.

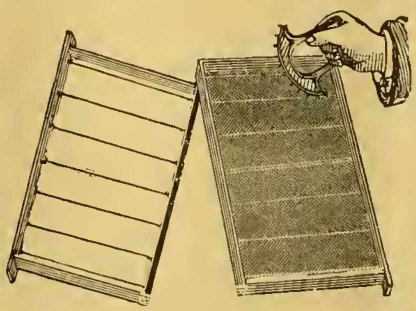
Sample Crate, nailed, containing 24 sections, without glass, by express.....................................$	60
Material, ready to nail, 50 Crates........................	6 00
" " " 100 Crates......................	11 50
" " " 1 Crate and 1 Section, by express	15
" " " " " by mail, postpaid	70
Glass for these Crates, per 100 lights.....................	2 00



The above Crate will hold **twelve two-pound Sections** of honey. Either the Crate or the Sections may be glassed. The gross weight of this Crate, when filled with honey, is about 25 pounds; making it a neat and convenient package for handling and shipping.

Sample Crate, containing 12 two-pound Sections, nailed, without glass, by express...........................$	50
Material, ready to nail, 50 Crates	4 75
" " " 100 Crates...........................	9 00
" " " 1 Crate and 1 Prize Box, by express	15
The same, sent by mail, postpaid.........................	65
Glass for these Crates, per 100 lights.....................	3 00

☞ All these Crates can be furnished, when so ordered, with a solid piece of wood for one side, instead of slats grooved for glass, without extra charge.



Wiring Tool,

FOR

Pressing Foundation

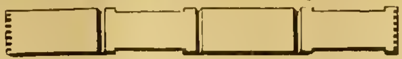
INTO

WIRED FRAMES.

SOMETHING VERY USEFUL.

Price, by mail, 20c.
By express, 15c.

ONE-PIECE SECTIONS—for Honey in the Comb.

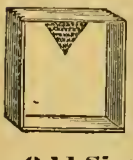


We keep constantly in stock the two regular sizes, 4¼x4¼, and 5¼x6¼, a trifle less than 2 inches wide, with both narrow and wide tops; these will respectively hold about one and two pounds of honey each. We also have them seven to the foot, with narrow tops. The following are our latest prices:

	4¼x4¼.	5¼x6¼.
In quantities of 1,000	$3 50	$4 50
" " 500	2 00	2 50
" " 250	1 25	1 50
" " 100	60	70

☞ Orders for 3,000, or more, 4¼x4¼, at $3.00 per thousand. ☜

DOVETAILED SECTIONS.

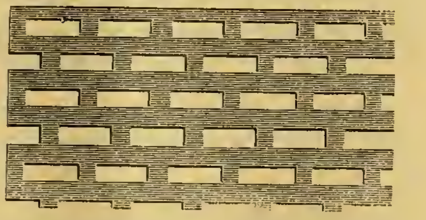


These are made in four pieces, 5¼x6¼, with wide or narrow tops; all a shade less than 2 inches in width. The prices are the same as the one-piece sections.

We fill all orders of the above size, and **carry no others in stock.**

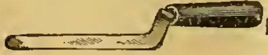
Odd Sizes of Sections, 5x6 inches, or less, will be made to order in quantities not less than 500, at $3 for 500, or $5 for 1,000, and can be furnished in about a week after we receive the order.

Perforated-Zinc for Excluding Drones and Queens.



We carry in stock two sizes, viz: 19¾x14½ inches, for Langstroth Hives—price, 20 cts. each; also in sheets 3x8 feet—24 sq. ft.—price, $2.00 per sheet. We can cut pieces to order at 10 cts. per square foot. Strips, with one row of holes, ¾x19, 90 cents per hundred. When ordered by mail, add 10 cents per square foot, for postage.

The Muth Honey-Knife.

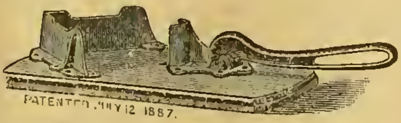


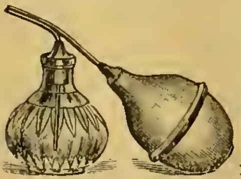
By express,	50c
By mail, postpaid,	65c

SECTION PRESS.

The Wakeman & Crocker **PRESS**, to be used for putting together One-Piece Sections—at wholesale or retail.

Price, **$2.00** each, by express. By the dozen—rate given upon application.


PATENTED JULY 12 1887.



Atomizer for Spraying Bees.

This Atomizer can be used to advantage for changing the scent of bees when introducing queens, uniting colonies, making nuclei, dividing colonies, etc. Price, 75 cts.

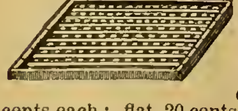
Mailed in a neat box, at letter postage, for 16 cents extra.

LONG RUBBER GLOVES.

Long Rubber Gloves, per pair, by mail	$1 50

To ascertain the size of glove desired, lay the open hand, palm down, on a sheet of paper, and mark the outline of the hand and fingers with a pencil.

WOOD-ZINC SLATTED HONEY-BOARD.

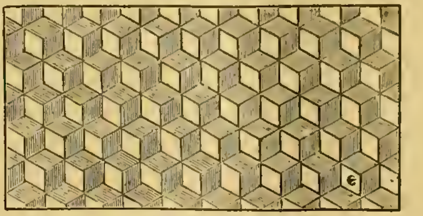


This honey-board is made of alternated strips of wood (1⅛ inches wide), and perforated zinc (¾ of an inch wide), with one row of holes. The zinc strips are held in place by fitting into saw kerfs on the sides of the strips of wood. Price, nailed, 30 cents each; flat, 20 cents. In ordering, please give the exact outside dimensions desired. When no size is given, we will furnish them to fit the standard Langstroth hive.

Comb Foundation for Brood-Frames.

All our foundation is made by Dadant & Son, who have justly earned the reputation of making the best foundation in the world.

We keep four sizes on hand, viz: 4¾x17, 12x18, 8x16½, and 10x11, and can fill orders in any quantity, prompty. Orders for special sizes filled within a week of the receipt of the order, without extra charge, and it will be shipped direct from the factory.



One pound, by mail, postpaid, small sheets	70c
1 to 10 lbs., per lb., by express	45c
11 to 25 " " "	44c
26 to 50 " " "	43c
51 to 100 " " "	42c

Prices Subject to Change, Without Notice.

Thin Foundation for Surplus Honey.

We keep three styles of thin foundation for comb honey in sections. The figures in the first column giving the prices of the THIN—9 to 10 square feet to the pound. Those in the last column being the prices of the EXTRA THIN, and also of the Van Deusen (with flat bottom)—11 to 12 square feet to the pound:

	THIN.	EXTRA THIN.
1 to 10 lbs., per lb., by express	55c	65c
11 to 25 " " "	54c	64c
26 to 50 " " "	53c	63c
51 to 100 " " "	52c	62c

Wired Comb Foundation.

This prevents sagging, making all combs strong and durable. It has flat-bottomed cells, exceedingly thin and even, the wire being incorporated into it. It is for use only in the brood-chamber. Size, 8x16½ and 10x11 inches.

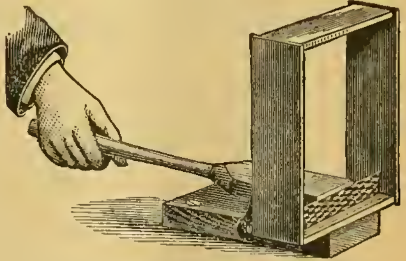
1 to 25 lbs., per lb	65c
25 to 100 " "	63c
Samples of all kinds, by mail	10c

PARKER'S

Foundation Fastener

Price, 25 cents, by express, or 40 cents, postpaid. Suitable for 1 lb. sections.

The fastener should be screwed to a table. The illustration will show the position of the section and foundation, and the method of operating.



Comb Foundation Mills.

	Vandervort.	Root.
6 inch Rolls	$15 00	$13 50
10 "	20 00	20 00
12 "	25 00	30 00
14 "		40 00

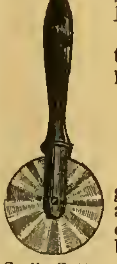
Carlin Foundation Cutter.

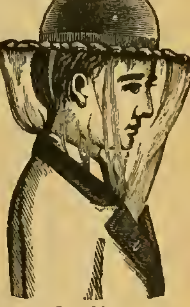
Small size, with tin wheel,	10c
Large size, with steel wheel,	75c

When wanted by mail, add 2c. to the former and 5c to the latter price.

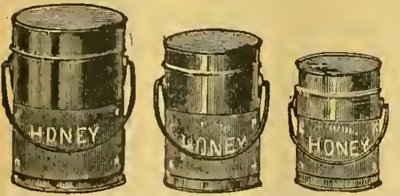
Bee Veils.

The accompanying illustration gives a good view of these veils as they are worn,—making it a complete face protection. Price, by mail, 30 cents.


Carlin Cutter.


Bee Veil.

Straight Tin Pails for Honey.



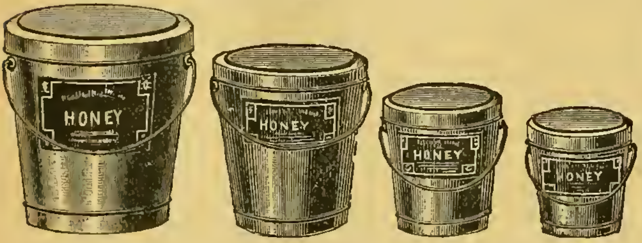
These pails have a full cover, and are excellent for selling honey in the home market, and after the honey is candied, it can be shipped anywhere.

All sizes have a bail or handle, and when empty will be found useful in every household.

Assorted samples of the three sizes, put inside of one another as a nest, price 40 cents by express. The following are the prices in quantities:

		Per dozen.	Per 100.
Gallon,	holding 10 lbs. of honey	$1 80	$12 00
Half Gallon,	" 5 " "	1 50	9 00
Quart,	" 2½ " "	1 20	7 00

Tapering Tin Pails for Honey.



It will be noticed that these pails are tapering in shape. All the sizes have a bail, and on the 25-lb. pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides, the covers are deeper, and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Assorted samples of the five sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cents. Prices in quantities as follows:

To hold	1 lb.	4 lbs.	7 lbs.	13 lbs.	25 lbs.
Per dozen	$ .75	$1.25	$1.50	$2.00	$3.25
Per 100	5.00	8.00	10.00	14.50	23.00

Wooden Pails for Honey.

Wooden water-pails, well painted outside, with 3 iron hoops and a tight-fitting, wood cover, at $2 per dozen. They hold 25 lbs. of honey, and, when empty, they can be utilized as an ordinary pail.

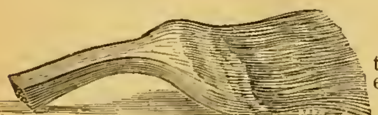
Red Labels for Pails.

Three sizes, ranging in size for pails to hold from one to ten pounds of honey. Price, $1.00 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than one hundred. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1 50	$2 00	$2 25
500 Labels	2 00	3 00	3 50
1,000 Labels	3 00	4 00	5 00

Samples of each of the Labels will be sent free, upon application.

YUCCA BRUSH.



For brushing bees from the combs. Price, 5 cents each, or 50 cents per dozen. Postage, 1c. each, extra.

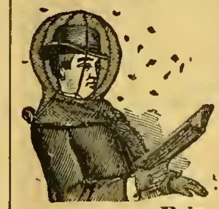
SEEDS for HONEY PLANTS.

White Clover—per lb., 30c—per peck, $2.75—per bu. (60 lbs.)	$10 00
Alsike Clover—per lb., 25c—per peck, $2.25—per bushel	8 00
Melilot or Sweet Clover—per lb., 20c—per peck, $1.75—per bu.	6 00
Bokhara Clover—Imported—per pound	50
Spider Plant per oz., 20c....per lb.	2 00
Motherwort " 10c.... "	1 00
Cleome, Rocky Mountain Bee-Plant " 15c.... "	1 25

We keep no seeds in stock except those enumerated above.

IF TO BE SENT BY MAIL, add 10 cents per pound for postage.

NEW BEE VEIL.

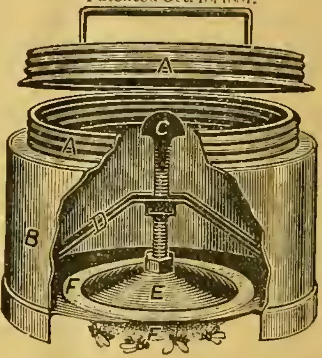


There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect; the weight of the entire Veil being only five ounces.

Price by Mail or Express, $1.00.

Hastings' Perfection Bee-Feeder.

Patented Oct. 18, 1887.



This Feeder will hold 1 quart, and the letting down of the feed is regulated by a thumb-screw.

The cap screws on securely. It is easy to regulate—either a quart or a spoonful—and that amount can be given in an hour or a day, as desired. By it the food can be given where it is most needed—just over the cluster. Not a drop need be lost, and no robber bees can get at it.

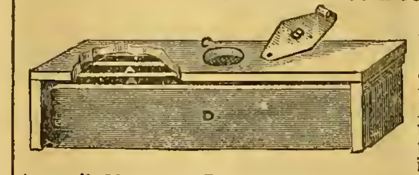
Price, 40 cents, or a dozen for $3.50. Postage, 10 cents extra.

Feeder for Top of Hive.

It has two side entrances for the bees, and the cover of the hive is the cover to be used on the feeder. It is the full size of the hive, and is filled with the usual partitions on which the bee may travel. It has a large capacity. Price.—Nailed, 50 cents; flat, 35 cents each.

☞ When no size is given, we will send them to fit the standard 10-frame Langstroth hive.

Shuck's Bee-Feeder.



A Shuck Feeder may be placed at the entrance of the hive, any time of the day, without danger from robbers; it feeds much or little as may be desired; the feed can be reached by the bees only from the inside of the hive. Price, by mail, 30 cents. By express, 25 cents each, or $2.40 per dozen.

WIRE NAILS.

We carry a full line of wire nails, and can fill orders for any quantity promptly. For nailing Sections, Cases, Frames, Racks, Crates, etc., they are very essential.

The entire length of the nail being the same thickness, they do not loosen like ordinary iron nails, and are not as liable to bend or break. They can be easily driven through two pieces of tin.

From the assortment of lengths given in the table below, any kind of nailing may be done, even to making large boxes.

Length of Nails.	Size of Wire.	Number in one lb.	Price.
⅜ inch long,	wire No. 20,	10,000	per lb 25c
½ "	" 19,	5,330	" 20c
⅝ "	" 18,	3,300	" 16c
¾ "	" 18,	2,750	" 15c
⅞ "	" 17,	1,780	" 13c
1 "	" 17,	1,555	" 12c
1¼ "	" 16,	910	" 10c
1½ "	" 16,	760	" 10c
2 "	" 15,	435	" 9c

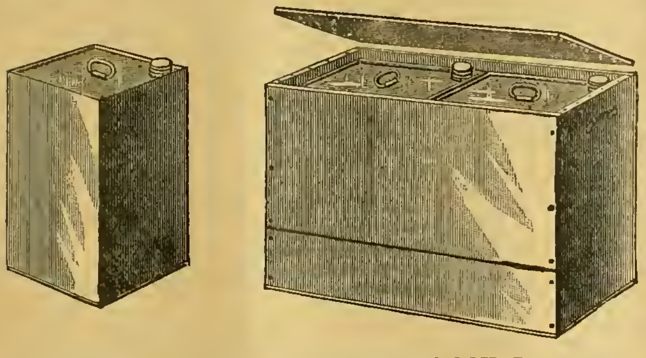
If wanted by mail, add 18 cents per pound for postage.

☞ We can furnish larger nails, in 5-pound packages only—up to 5 inches in length—when desired.

Enameled Cloth,

For covering frames. Price per yard (45 inches wide), 20 cents; a whole piece of 12 yards for $2.25. If ordered by mail, send 15 cents per yard, extra, for postage.

SQUARE HONEY-CANS



The above illustrations show the 60-pound SQUARE HONEY-CANS which are becoming quite popular for shipping extracted honey. They are enclosed in a solid case of wood, and the boxes contain either 1 or 2 Cans, as may be preferred. We can furnish them at the following prices, with a 1½-inch Screw-Cap in the corner of each Can. For the convenience of digging out candied honey, we can furnish these Cans with an additional 4-inch Screw Cap, for 5 cents extra on each Can.

1 Single Can..boxed..	$ .45	1 box of 2 Cans	$ .75
12 Single Cans.boxed..	5.00	12 boxes of 2 Cans	8.40
100 Single Cans.boxed..	40.00	100 boxes of 2 Cans	65.00

EXCELSIOR HONEY-EXTRACTOR.

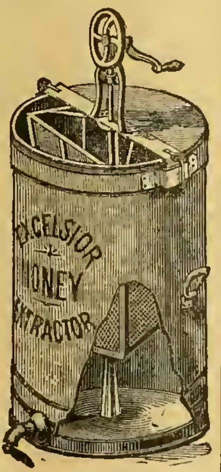
We respectfully refer all who are looking for the best Honey-Extractor, to any one using an Excelsior. The Excelsior honey-extractor can only be equaled by close imitation, and never excelled. It is made entirely of metal, and is consequently very light, strong and durable, with lugs at the bottom for firmly attaching it to the floor, if desired.

For 2 American frames,	13x13	inches	........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	........10 00
For 4 " "	10x18	"	........14 00
For 2 frames of any size,	13x20	"	........12 00
For 3 " "	13x20	"	........12 00
For 4 " "	13x20	"	........16 00

The $8.00 and $10.00 sizes are made to accommodate those who desire a cheap but practical machine. The Cans are smaller, the sides of the baskets are stationary, and they have neither covers, strainers, nor metal standards.

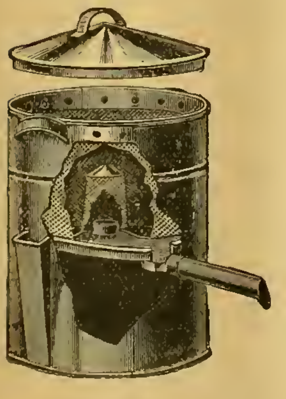
The Comb-Basket having vertical sides, insures the extracting power alike for the top and bottom of the frames. The sides of the basket in the $12.00, $14.00 and $16.00 Extractors being movable and interchangeable, greatly facilitates the operation of thoroughly cleaning. The basket can be taken from or replaced in the Can in a moment, there being no rusty nuts to remove, or screws to take out.

At the bottom of the Can, and below the basket, is a cone or metal standard in the $12.00, $14.00 and $16.00 Extractors, in the top of which revolves the bottom pivot of the basket, thereby giving room for 60 to 100 lbs. of honey without touching the basket or pivot below. Cans of the other sizes are shallow.



The $12.00 size.

Excelsior Wax-Extractor.



We make two sizes, the smaller one having about the capacity of the usual wax-extractors now in use.

The advantages of this extractor are:

1, It is more easily operated, there being no necessity for removing the top to refill it with water.

2. The wax melts more quickly, because it is brought into a more DIRECT contact with the steam.

3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.

The filler for water acts also as an indicator as to the amount of water in the boiler; for when the steam escapes through the filler, more water will be required.

Keep a kettle of hot water ready to fill it when required.

Price, small size,........................	$4 00
" large "	5 00

BINGHAM SMOKERS.

The Michigan Bee-Keepers' Association, having all the Smokers before it, "pronounced Bingham's Patent Smoker the best."

J. P. Moore, Binghamton, New York, after using one some time, said: "My Smoker troubles are all over, and bee-keepers owe you a debt of gratitude."

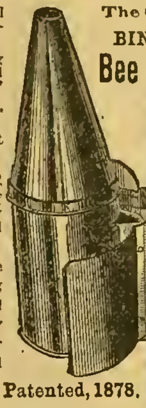
Professor Cook, of Michigan Agricultural College, says: "It is the best in the market."

R. M. Argo, Lowell, Kentucky, says: "It is all that any bee-keeper could desire."

Paul L. Viallon, Bayou Goula, La., writes, April 6, 1878: "Your Smokers are far superior to any ever invented, and we bee-keepers owe you a vote of thanks for your ingenious invention. Many may try to improve on yours, but I am positive none will make a better one."

This is the first and only bellows Smoker ever made which would burn stove-wood. It burns anything combustible, and needs no care except to be refilled once in one or two hours. Works easy and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time, stings, and money, and perhaps a valuable horse.

The Original BINGHAM Bee Smoker

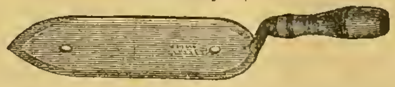


Patented, 1878.

BINGHAM & HETHERINGTON

HONEY KNIVES.

Patented May 20, 1879.



The most extensive Bee-Keepers use them exclusively.

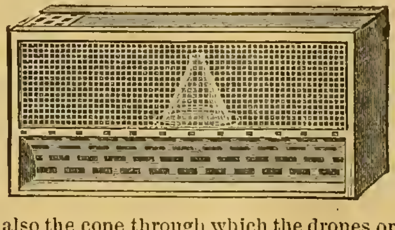
The Knife is so constructed that only the thin beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings from a sharp plane. As only the edge of the knife touches the honey, it does not wade and stick like other knives, but glides easily over curves, planes and hollows, leaving the uncapped honey free from caps, and the cells as clean, perfect and smooth as if they had never been capped. They are two inches wide, tempered and finished like a razor, and will last for a life-time.

			each.	per dozen.
The Doctor Bingham Smoker........................	3½	inch,	$2 00	$14.00
The Conqueror Bingham Smoker	3	"	1 75	13.00
Large Bingham Smoker, wide shield................	2½	"	1 50	11.00
Extra Standard Bingham Smoker, wide shield....	2	"	1 25	9.50
Plain Standard Bingham Smoker, narrow shield..	2	"	1 00	8.00
Little Wonder Bingham Smoker, narrow shield...	1¾	"	65	5.00
Bingham & Hetherington Honey Knife............	2	"	1 00	10.00

Knives sent by mail, post-paid, at $1.15 each.

Drone and Queen Trap.

The engraving shows Alley's Combined Drone and Queen Trap, with the perforated-metal entrance, the tin slide, the perforated metal at the top, through which the workers, that enter the trap, pass out, and also the cone through which the drones or queens pass into the trap. The front of the trap, as will be noticed, is covered with wire cloth.



In using the trap place the open side towards the entrance of the hive; the tin slide which forms the top need not be opened except when a queen is to be released, or drones are to be removed.—Arrange the entrance so that all the bees must pass through the zinc. Full directions accompany each trap.

Price 50 cents; by mail, 65 cents; 12 in the flat, and one nailed, 13 in all, $3.50; 50 in the flat, $12.00.

T-TINS.

Any length, per foot, 1 cent. For Langstroth Hives, 14 inches, 1 cent each.

PURE HONEY
FROM
F L. SCHUELER'S APIARY
LA SALLE, ILL.
WARRANTED STRICTLY PURE.

No. 5.

PURE EXTRACTED
WHITE CLOVER
HONEY
From the Apiary of
M. HARRISON & CO.
TAMA CITY,
IOWA.

No. 6.

TWO POUNDS
PURE
EXTRACTED
HONEY
GATHERED FROM
WHITE CLOVER.
FROM THE
ITALIAN APIARY
—OF—
JOSEPH I. WATSON,
JANESVILLE, WIS.

No. 11.

Comb Honey
FROM THE APIARY OF
HARVEY FEATHERS,
ROYALTON, WIS.

No. 1.

Gross Weight............lbs.............oz.
W't of Case............lbs.............oz.
W't of Honey............lbs.............oz.

No. 18.

WARRANTED
PURE HONEY
G. DARE, Adams, Iowa.

No. 15.

COMB HONEY
From the Apiary of
WM. H. JOHNSON,
OMAHA, NEB.

No. 2.

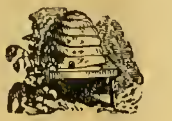
PURE EXTRACTED
HONEY
White Clover.
From the Apiary of
BRIGHT BROS., Mazeppa, Minn.

No. 16

ONE POUND

PURE

EXTRACTED



HONEY

GATHERED FROM

BASSWOOD.

From the Apiary of

E. T. JORDAN,

HARMONY, IND.

No. 7.

PURE HONEY

PUT UP BY

W. W. FISHER,

TOLEDO, OHIO.

No. 10.

PURE HONEY

GATHERED FROM

WHITE CLOVER,

FROM THE APIARY OF

GEO. W. PENN,

BRIDGEWATER, CONN.

This honey is separated from the combs by the Extractor just as it is brought in from the flowers, preserving the respective flavor of each variety. It is not possible in all cases to have the contents of each jar entirely from the blossoms named, yet sufficiently so to give their characteristic flavor.

No. 14.

ONE-HALF POUND

PURE HONEY

G. HART, Kent, O.

No. 12.

WARRANTED

PURE

HONEY

F. A. GIBSON,

RACINE,

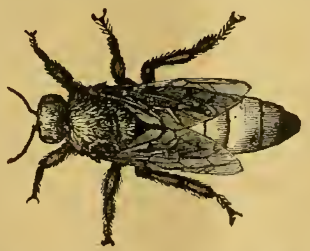
Wis.

No. 13.

.............**LBS.**

PURE

EXTRACTED



HONEY

From the Apiary of

JOHN H. BALL,

Palatine, N. Y.

All pure honey will crystalize, especially if exposed to the cold. Putting the jar in hot water will bring the candied honey to its fluid state without injury.

The corks should be loosened and the water heated gradually, in order not to crack the jar.

No. 4.

HANDLE WITH CARE.

No. 8.

WHITE CLOVER HONEY.

It is not possible in all cases to have the contents of each package entirely from the blossoms named, yet sufficiently so to give distinctly their characteristic flavor.

This honey will candy as soon as cold weather begins and is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the cover so it will not ooze out. When it is all melted, remove and cover again. Some liquify it by placing the receptacle in hot water, supported on a thin strip of wood.

No. 17.

PURE HONEY

From the Apiary of

JAMES W. HANSON,

CHICAGO, ILL.

No. 3.

PURE HONEY

This honey will candy as soon as cold weather begins, and is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the cover so it will not ooze out. When it is all melted, remove and cover again. Some liquify it by placing the receptacle in hot water, supported on a thin strip of wood.

L. ADAMS,

MAYFAIR, Cook Co.,

ILLS.

No. 19.

TAKE NOTICE.—This honey will candy, or become white and hard, as soon as it becomes cool, or cold weather begins, and this candying is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the stopper or cover so it will not ooze out. When it is all melted, remove and cork or cover again. If sealed up while quite hot, with a cork dipped in melted wax (or with the inside of the cover waxed), it will usually not candy again. Some liquify it by placing the bottles in hot water. To prevent breaking the glass, let the bottles rest on a thin strip of wood.

No. 9.

PRICES OF GUMMED LABELS,

As Shown on the two Preceding Pages.

As will be noticed, each Label is numbered, the numbers on the Labels corresponding with those in the following table of prices. All the Labels shown on pages 134 and 135 will be printed on white paper, either in black ink or in two colors, as desired. Orders must be for 250, 500, 750, 1000, 1250, 1500, 1750, 2000 and so on.

We can furnish these Labels with any changes in reading matter that may be desired; or we can make a complete change of matter for other goods, such as Pickles, Maple Syrup, Horse-Radish, etc., without extra charge.

The labels shown on the **2** preceding pages will be printed with your own name and address, on all where a name and address occurs, and gummed ready for use. The following prices are arranged by numbers corresponding with those underneath each label :

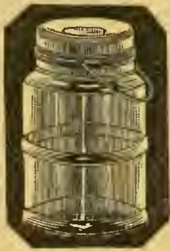
In Black Ink.

No. of Label.	250	500	1000
1	$1 00	$1 50	$2 00
2	45	70	1 00
3	45	70	1 00
4	1 25	1 75	2 10
5	1 25	1 75	2 25
6	1 00	1 50	2 00
7	1 00	1 50	2 00
8	15	25	40
9	25	45	75
10	45	70	1 00
11	1 25	1 75	2 25
12	75	1 25	1 75
13	50	75	1 25
14	1 25	1 75	2 25
15	1 00	1 50	2 00
16	75	1 25	1 75
17	45	70	1 00
18	25	45	75
19	1 00	1 50	2 00

In Two Colors.

No. of Label.	250	500	1000
1	$1 25	$1 85	$2 50
2	70	1 00	1 25
3	70	1 00	1 25
4	1 75	2 10	2 60
5	1 75	2 10	2 75
6	1 25	1 85	2 50
7	1 25	1 85	2 50
8	25	40	60
9	45	75	1 00
10	70	1 00	1 25
11	1 50	2 10	2 75
12	1 25	1 75	2 25
13	75	1 25	1 75
14	1 50	2 10	2 75
15	1 25	1 85	2 50
16	1 25	1 75	2 25
17	70	1 00	1 25
18	45	75	1 00
19	1 25	1 85	2 50

GLASS PAILS FOR HONEY.



These Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the appearance is unequaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they may be returned to and re-filled by the apiarist.

Prices: To hold 1 lb. of honey, per doz. $1 60
" " 2 lbs. " " 2 00
" " 3 lbs. " " 2 50

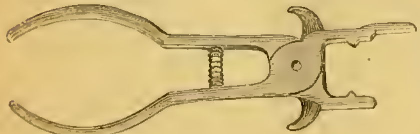
They are packed in barrels containing 12, 6 and 4 dozen of each size, respectively. Discount 15 per cent. on orders for those exact quantities.

Square Glass Honey-Jars.

One pounds, flint glass, per gross	$5 00
Two " " "	6 50
Corks for same, per gross	75
Tin-Foil Caps for same, per gross	80
Labels for same, per gross (name and address blank)	75

These Jars, at the above prices, will be shipped from Cincinnati, O.
We will not be able to fill any more orders for common glass jars.

JONES' FRAME PLIERS.



For taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, has a long claw for loosening frames, and a hook which may be used to carry other frames besides the one held by the Pliers. Price, by express, 30 cts.; by mail, 40 cts.

Paper Boxes,

To hold a section of honey 4¼x4¼, or 5¼x5¼, for retail dealers. Prices, $1.00 per 100, or $8.50 per 1,000.

☞ Name and address of bee-keeper, and the kind of honey printed on 1,000 or less for 75 cents extra.

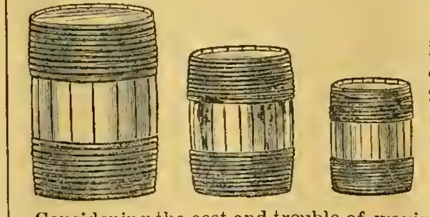
Metal Rabbets.

Any length, per foot	1c
For Langstroth Hives, 14 inches, each	1c

KEGS FOR EXTRACTED HONEY.

These kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be thoroughly scalded with boiling water before used. Do not soak them. Prices :

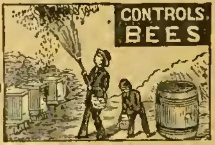
5 gallon kegs, holding a trifle over 50 lbs	40c
10 " " " " " 100 lbs	60c
17 " " " " " 175 lbs	80c



We make the following discounts on large orders—10 per cent. on 25 or more, 12½ per cent on 50 or more, and 15 per cent. on 100 or more kegs.

Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these kegs can be handled and shipped, with an actual saving in orignal cost, it is apparent to all that they are the best. Often a five or ten gallon keg of honey can be sold where a barrel might go begging for a customer.

Whitman's Fountain Pump.

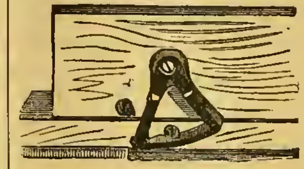


Price, by express or freight $8.00

BARNES' FOOT-POWER SAWS.

A complete illustrated catalogue and price list of these machines will be mailed free, upon application. Machines on trial if desired.

Hive-Clamps for Loose Bottom-Boards.



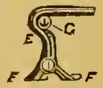
VAN DEUSEN.

VAN DEUSEN.

Sample set, by mail,..........15c
By express, per set, ...10c
☞ Per 100 Clamps (25 sets), $1.50 ☜

ACKERMAN.

Sample set, by mail, 20c
By express, per set,. 15c

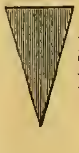


ACKERMAN.

Stanley's Automatic Reversing Honey-Extractor.

This extractor is now owned by Mr. E. R. Newcomb. We can supply these machines at the following prices : 4-frame, $20.00 ; 3 frame, $16.00 ; 2-frame, $12.00. These prices are for the Langstroth frame only, and they will be shipped direct to customers from the factory in New York. If you want one for a frame of any other size, you must send us a sample frame in order to avoid mistakes.

Tin Points, for Glassing Sections.



Put up in lots of 1,000, and sent by mail, postaid	50c
The same by express or freight	40c
From 5,000 to 10,000, by express, per thousand	30c

Square Tin Points at the same price as the above.

MISCELLANEOUS.

Little Detective Scales, ¼ ounce to 25 lbs		$2 50
Honey-Gate for Excelsior Extractor		75
Novice's Metal Corners, per 100		50
Wire-Cloth for Extractors, 3 feet wide, tinned, per square foot		15
" " queen-cages, tinned, per square foot		22
" 14 mesh, painted		08
Gearing for Honey-Extractor		1 50
Glass for Two-Pound Sections (5x6 in.), per box of 240 lights		2 50
Wire for Foundation, per ounce spool, 3c	by mail	05
" " " per 1-lb. spool, 35c	"	53
Handles for Honey-Gates, 25c	"	40
Novice Iron Blocks for making metal-corner frames, 15c,	"	25
Queen-Registering Cards, per dozen	"	10
Scissors for clipping Queens' Wings	"	50

SUPPLIES FOR BEE-KEEPERS—For Sale by Thomas G. Newman & Son, Chicago, Ills.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

* * *

Complimentary Words.—Here are some of the newest expressions of satisfaction from patrons who have purchased supplies of us:

I have received the seed. Well, to tell the truth, if a man could get supplies that quick, when he wanted them, it would save lots of money, and hard words, too.—C. K. Reading, Davenport, Iowa.

The Singer Sewing Machine you sent me, does splendid work. I am well pleased with it.—G. Ruff, Burlington, Iowa.

My bill of goods I ordered from you reached me all right and in good condition—everything as I ordered.—Robt. Harvey, Aurora, Ills.

* * *

☞ The Texas *Farm and Ranch* has the following complimentary notice:

The American Bee Journal, published at Chicago, Ills., comes to our desk weekly, loaded down with good things for bee-keepers.

* * *

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

* * *

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

HONEY AND BEESWAX MARKET.

NEW YORK, May 6.—Comb Honey is well cleaned up, with the exception of California 2 lbs., which sell at 10@11c per lb. Extracted is dull at 7c for California, white clover and basswood; Southern, 70@75c per gallon. Beeswax, scarce at 27@28c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, May 2.—Receipts of honey are light, and demand fair for choice white clover at 13@14c. Other grades are dull and neglected. Extracted, 6½@7½c. Beeswax, bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 25.—Market is cleaned up on comb honey. We quote: White 1-lbs., 14c.; 2-lbs., 13c. Dark 1-lbs., 10@12c.; 2-lbs., 10@11c. Extracted is very dull sale at 5@7c. No Beeswax in the market.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, May 1.—Comb honey sells soon after arrival, if white and otherwise desirable, at 12, 13 and 14c; dark comb is slow at 8@10c. Weather is cool and seemingly favorable to its sale. Extracted, 6@8c, according to quality; some with no distinct flavor has sold at 5c. Beeswax—Yellow, about 27c; fancy, 28c; supply light. R. A. BURNETT, 161S. Water St.

MILWAUKEE, May 1.—Demand for honey is rather light. Supply is ample, of both comb and extracted. We quote: Best white 1-lbs., 13@14c; medium 1-lbs., 11@12c; common old 1-lbs., 9@10c. Extracted, white, in barrels and half-barrels, 7@8c; dark, in barrels and half-barrels, 6@6½c. Beeswax, 25@26c; supply light. A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May 2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.
HAMBLIN & BEARSS, 514 Walnut St.

DENVER, May 5.—One-pound sections, 14@16c; extracted, 7@9c. Demand good and supply likely to be exhausted before the new crop comes in. Beeswax, 22@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, May 2.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.
Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1mly.

☞ Clubs for anything in our Premium List may be for either of our Journals, or for any number of either or both of them.

Advertisements.

JAPANESE BUCKWHEAT

PURE SEED.—One bushel, **90** cents; two bushels for **$1.50**—in bags.
20A4t C. A. GRAVES, Birmingham, Ohio.
Mention the American Bee Journal.

Knickerbocker Bee-Farm

SEND FOR

CIRCULAR AND CALENDAR
FOR 1890,

To **GEO. H. KNICKERBOCKER,**
Box 41, PINE PLAINS, Duchess Co., N. Y.
20E2t
Mention the American Bee Journal.

200 LBS. OF BEES
50 ITALIAN QUEENS—after May 24, at $1.00.
S. C. PERRY,
Portland, Ionia Co., Mich.
20Atf
Mention the American Bee Journal.

WANTED! TO EXCHANGE FOUNDATION for **Cash.** Foundation first quality. Satisfaction guaranteed. For Brood, 40c; for Sections, 50c per lb. Samples furnished.
19A2t **WILBER G. FISH, Ithaca, N. Y.**
Mention the American Bee Journal.

Voice of Masonry and Family Magazine.
Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine **Portraits** and **Illustrations**, and a great variety of articles, stories and poems for Freemasons and their families; also **Eastern Star, Masonic Gleanings** and **Editorial Departments.** Price per year, $3.00.
JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.

BEE-KEEPING FOR PROFIT

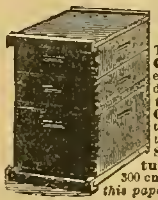
IS THE TITLE OF

DR. TINKER'S NEW HAND-BOOK.

IT GIVES his **NEW SYSTEM** of the management of bees complete, telling how to get the Largest Yields of Comb and Extracted Honey, and make the industry of Bee-Keeping a profitable one.

The claim is made that our old methods and appliances are of such a nature that it does not pay, even the expert bee-keeper, to keep bees, except in very favorable localities. The New Book tells why these failures occur, and how to prevent them, giving the general principles essential to a profitable system. The work should be in the hands of every progressive apiarist.

It is well illustrated, and will be sent, postpaid, to any address, for **25** cents. Please remit by postal note. Address,
DR. G. L. TINKER,
20Atf New Philadelphia, Ohio.

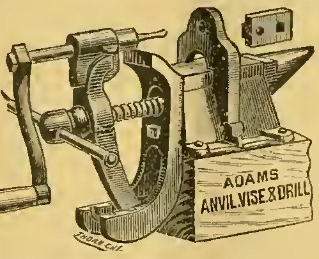


BEES AND HONEY
The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

COMBINED

ANVIL, VISE AND DRILL

The Handiest Tool in Use about a FARM, SHOP, OFFICE OR HOUSE.



Price, Complete, $4.00.

The Drill Attachment can be put on or taken off instantly. Farmers especially will find it of great convenience to be able to drill a hole through a piece of Iron without making a trip to town. The Anvil and Vise combine strength and durability, the whole making one of the most complete and useful tools. Width of Jaw, 1¾ inches.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

LOST The old prices on Bee-Hives, and new ones found. Send for Circular—FREE.
14Etf **L. J. TRIPP, Kalamazoo, Mich.**

Mention the American Bee Journal.

CARNIOLAN **QUEENS & BEES** bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

Mention the American Bee Journal.

1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

My 22nd Annual Price-List of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. H. H. BROWN,
14E4t 23C2t Light Street, Columbia Co. Pa.

Mention the American Bee Journal.

The Bee-Keepers' REVIEW

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PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 24, 1890. No. 21.

EDITORIAL BUZZINGS.

Express Charges are often exhorbitantly high, and complaints are many concerning them, by those who get goods sent in that way. We notice that a bill has been introduced into the United States Senate, the object of which is to so amend the Inter-State Commerce Law so that all Express Companies shall be placed under the provisions of that law. The Express Companies should certainly be placed under restraint—just as reasonably as the Railroad Companies. We should like to see a law passed allowing the Post-Office to transmit parcels of all kinds at reasonable rates. That would bring down the express charges in a hurry.

* * *

Judge W. H. Andrews, of McKinney, Texas, is reported to be very ill. This we regret to learn, and offer our sympathy to the Judge, and hope for a speedy recovery. The Texas State Bee-Keepers' Association, of which he was one of the projectors, at its late meeting on the 7th inst, unanimously passed the following resolutions of sympathy:

> The Texas Bee-Keepers' Association, now in session, have heard, with deep regret, of the severe illness of Judge W. H. Andrews, one of the oldest and most influential members of this Association, and who has contributed more than any other to its success, and therefore be it
>
> *Resolved*, That, as an Association, we deeply sympathize with him and his family in their deep affliction, and hope that his useful life will be spared; and
>
> *Resolved*, That a copy of these Resolutions be sent to him, as a memento of our remembrance of him and our sympathy in this hour of affliction, hoping for his recovery. Adopted.
>
> W. R. GRAHAM, *Pres.*
> J. N. HUNTER, *Sec'y.*
>
> Greenville, Texas, May 7, 1890.

The Prospect now is excellent for a good crop of honey, if no further set-back is in store for us. It has been cold for May, but by the time this JOURNAL is in the hands of its readers, it will probably be warm and pleasant, and summer will have set in for good. Mr. C. H. Dibbern, in the *Western Plowman*, reports thus for northern Illinois:

> In this section the clover crop is now entirely safe, and the stand is exceptionally good. Everything else also promises well, and with good weather and prudent management, we ought to produce a large crop of very fine honey.
>
> There is a time of scarcity in many places after the fruit blossoms have disappeared. It is a very good plan to do a little feeding at that time, although the bees have honey enough to last until the clover begins to blossom. When breeding is going on rapidly, the stores are being consumed at an astonishing rate, and if honey is not coming in, the queen soon takes the alarm, and laying eggs is greatly diminished. It must be remembered that now is the very time that we want all the brood, in all the hives, that we can possibly get there.

* * *

Protecting Bees in the Spring.—Prof. A. J. Cook remarks as follows on this subject in the New York *Tribune* of last week:

> There is no longer any doubt that bees do better, if, when removed from the cellar, in our northern latitudes, they are protected by a double-walled hive; or else, when set out in the spring, a box (somewhat larger than the hive) is set around the hive, and the space between—3 or 4 inches—packed with chaff, shavings, excelsior, straw, hay, or other like substances.
>
> I do not want a hive that one person cannot easily handle or carry, even when the bees are in it. Thus I am an opponent to chaff hives, which are expensive withal. Yet we must be able to accomplish all that the chaff hive will secure, as we set our bees on the summer stands in the spring.
>
> From our experience here at the Michigan Experiment Station, last year and this, I feel sure that every bee-keeper with single-walled hives can well afford to make special cases, or boxes, to set around the hives.
>
> We made 20 such cases this spring at a cost, cover and all, of less than $1.00 each. From appearances to-day, these protected colonies are breeding so rapidly that their added strength will secure more than a dollar's worth of honey above that which we will secure from the unprotected bees. Why, then, make chaff hives?
>
> This box is neat, costs less, does as well, and when the season opens can be put aside in some dry place until late autumn, or even until spring, if we winter our bees in a cellar.
>
> Then during the usual honey season we have the light hives, which are just as valuable for service, and are very easily handled or carried. We make these cases neatly, and nail them slightly, so that at the close of the chilly weeks of spring, we can pack them away in the "knock down." Thus they take but little room in summer.

* * *

To Beginners. Mr. G. M. Doolittle gives the following sensible hints in *Rural Homes*:

> Never undertake to keep many bees until you have become familiar with their nature and habits. Where a person who has no previous knowledge invests largely in bees, the sequel almost always shows that an entire loss of this investment is the result. Indeed this is likely to be the result in almost any pursuit in life, yet in no other calling is a little knowledge as necessary as in bee-keeping. Many do not seem to realize how fast bees increase, even if they are no more than doubled each year. If 2 colonies are bought to start with, 512 would be the number possessed at the end of the seventh season, or 1,024 at the send of the eighth. Thus it is that the bees increase as fast as does the knowledge of the owner.

* * *

The Trembling Bee-Disease.—We have received the following questions, with the request that they be answered in the BEE JOURNAL:

> We are having a very bad spring for the bees in Vermont. Cold and windy days have dwindled the colonies so that they are weak in numbers. A good many colonies have died in this vicinity, with plenty of of honey in the hives. I have lost 25 of my best colonies with the "nameless bee-disease," after doing my best to save them. I have 200 frames of worker-combs, clean and nice, that I shall use for new swarms. Please answer the following questions:
>
> 1. Will it be safe to use combs for new swarms, that are taken out of hives that the bees died with the nameless disease? 2. How would it work to dip the combs in strong brine, as salt as it can be made? 3. Will the bees carry the disease from one hive to another? 4. Will poor honey have the tendency to bring on the nameless or trembling disease? C. A. MARSH.
>
> Sharon, Vt., May 9, 1890.

1. Yes; the bees will clean them up. There is nothing contagious about that disease.

2. It would do no harm to the combs, but it is not at all necessary. Salt is used for the cure of the disease in the bees.

3. The bees, being diseased, communicate the disease to other bees under certain circumstances. A queen from a diseased colony, when placed in a colony perfectly healthy, communicated the disease to the bees in a very short time.

4. Yes; that has been the experience of many.

The following letter refers to the same disease:

> I want to ask a few questions about the "nameless" or "trembling" disease. Is it contagious? Is it best to remove affected colonies? Mr. Christie, of Smithland, told me that he at one time had a whole apiary badly affected with the disease, and that he got but little honey from them. He killed them all in the fall; he does not know whether it is contagious or not. I had several colonies affected last year, and during the basswood honey-flow they became all right, to all appearances. The affected ones were all near together. Now this spring the disease appears again, in about the same number of colonies, but in different parts of the apiary—I rather think that they are the same colonies that were affected lest year. Is there any danger of the other colonies getting the disease? I have a notion to move every affected colony to a separate yard. C. J. BARBER.
>
> Rodney, Iowa, May 10, 1890.

See answer to Mr. Marsh's letter, and an article from Prof. Cook on page 353.

GLEAMS OF NEWS.

The World's Fair Apiarian Exhibit.—In answer to the various questions as to what has been done, or what is intended to be done in reference to the apiarian exhibit at the coming World's Fair—Dr. Mason has sent us the following, to which we call particular attention :

On page 184, Mr. O. S. Compton, in writing of the bee-exhibit at the coming World's Fair, says : "Let us hear from Dr. Mason—what course he intends to pursue," etc., and on page 276, Mr. J. E. Pond asks, "Has any stir, as yet, been made in regard to 'bee-exhibits' at the World's Fair ?" and the editor partially answers.

Knowing that it is a good plan to be on hand in good time in Fair and Exposition matters, as President of our International Bee-Keepers' Association, I wrote to the presidents of the committees on the World's Fair, in both Chicago and New York, as soon as the committees were organized, suggesting that provision be made for an exhibit of everything used in connection with bee keeping, and a grand exhibit of honey; and in my address at the International Convention at Brantford, last December, I reported what I had done. By a resolution, introduced by Mr. C. P. Dadant, I believe, I was recommended by the Association as Superintendent of the Bee and Honey Department at the World's Fair. The Michigan and New York State Bee-Keepers' Associations have also made the same recommendations.

Gratifying responses have been received from the committee in charge at Chicago, in regard to the exhibit, and when the proper time arrives for making plans, the interests of our industry will be looked after. In the meantime, and as soon as possible, I shall be pleased to have persons interested in the success of the exhibit, whether they intend to exhibit or not, write me, making such suggestions as they may think best, so that the best plans and methods may be adopted for making the exhibit a credit to the fraternity, an honor to the Nation, and by far the grandest ever made anywhere.

Nothing definite has yet been concluded upon, and will not be until the complete organization of the management under the provisions of the World's Fair Bill, as recently passed by Congress; but our plans should be all ready to present when called for.

I have thought of recommending that all exhibits of honey be grouped together, and that supplies be in another group near the honey, and that each foreign country, and each of the United States be assigned a certain space, and, if so desired, each country and State have a Superintendent, who shall be assistant to the General Superintendent, the assistants to have charge of the exhibits from their own locality, and receive, put in place and care for such articles as may be sent for exhibition, and are not accompanied by the owner or exhibitor. The Assistant State Superintendents to be appointed (on the recommendation of the State Bee-Keepers' Association) and paid by the State making the appointment.

As soon as definite arrangements are made, they will be made known through the bee-periodicals. I have already received letters of inquiry in regard to this matter, and I would like to make a suggestion. It is, that all making inquiries will give their *post-office address, sign their names* to their letters, *and each enclose a stamp* for reply. As I "work for nothing and board myself," this does not seem an unreasonable request. I received a letter the present week with the name of the State left off, and if the post-master had been careless with his stamp, I should probably have been *blessed* by the writer for not replying.

I wish that all who intend to exhibit would let me know soon about how much space they will probably need—that is, about how many square feet of floor surface. At the Ohio Centennial in 1888, there were six principal exhibitors who occupied an average of over 230 square feet each, one using 70 square feet, and Mr. A. I. Root's exhibit was crowded, although he had about 400 square feet.

The States of Minnesota, Iowa, Illinois, Wisconsin, Indiana, Michigan and Ohio *ought* to average more than 1,000 square feet each, to say nothing of other States that will exhibit less, or even more, than either of the above named

And then, in addition to this, I am thinking that perhaps our friend, Mr. R. Mc Knight, will be on hand, backed by a galaxy of Canadians, and give us "Yankees" a pretty close call for the honors.

What honey is to be exhibited will, of course, have to be secured before 1893, for the Fair will probably open about May 1. I have been corresponding with some of the best honey exhibitors, and shall write to others to get their views as to the best methods to pursue.

I would like to suggest to such of the readers of the AMERICAN BEE JOURNAL as are botanists, that they begin at once to gather and prepare for exhibition such honey-plants as grow in their locality. All such plants could be put in one group and make a grand display, or they could be used to decorate the exhibit coming from the State or country that the plants come from. Perhaps it would be a good plan to have the plants all mounted alike, and I will try and secure the services of a good botanist to give proper instructions in preparing and mounting them, to all who desire, or are willing to do so, if they will address me, with stamps for reply.

Of course each State and Country should have a large sign over its exhibit, and each exhibitor should also have his name over his exhibit. Lay plans *now* for 1893, and "have an eye out" for anything that will help make a success of the honey exhibit. Now send on the suggestions, and let us work together to make the exhibit a grand success. Do not say that there is plenty of time yet, and put off to some future time what you have to say.

A. B. MASON.

The suggestions of Dr. Mason are "timely and good," and they should call out an abundance of suggestions from all who intend to make exhibits in the apiarian department of the Columbian Fair in 1893. Begin early to make arrangements, and then make the display the largest and most complete ever made in the world, and creditable for a great and progressive fraternity.

◆

The Hen that was near-sighted, and accidentally swallowed a bee, was not long in concluding that hers was a "peck" of trouble. It must have been a case of "henpecked" bee, that time.

◆

☞ The Catalogue of W. T. Falconer Mfg. Co., Jamestown, N. J., contains 24 pages, and a full list of Apiarian Supplies.

The Effect of Honey on the human system was thus stated by Prof. Frank R. Cheshire, F.R.M.S., in a lecture before the Institute of Agriculture at South Kensington, London, England :

All foods, if not already soluble (meltable) in water, such as bread, etc., have to be so altered within us that they become dissolved, and we call this solution digestion. Honey, on the contrary, or the sugar that we find in grapes, is already in the condition for absorption or assimilation, and really no kind of work has to be performed upon it before it is actually rendering us service as a force or heat producer. If honey, then, as a food be a giver of warmth to the system, a quickener of nervous and muscular energy, and a supporter of all vital functions, how important it is that it should be obtained in a pure condition.

Honey contains sugar in the form most suitable to assimilation. On this account it is desirable to take it in combination with some less readily absorbed material. Bread and honey has a time-honored memory, and is a combination as agreeable to sound physiology, as it is to the sense of taste. Children with rapidly developing frames and irrepressible activity, instinctively feel the value of sugars, and amongst these, honey takes a place second to none so far as the needs of the frame are concerned, whilst its aroma gives it first place on the list. The presence of a minute quantity of an animal acid, lend in addition a medicinal value, which in cases of sore throat and some other ailments is well-nigh universally recognized, while the Medical Council of Great Britain recommend the use of honey in no less than seven distinct pharmaceutical preparations.

◆

Complimentary Words.—Here are some of the newest expressions of satisfaction from our patrons :

I have received the seed. Well, to tell the truth, if a man could get supplies that quick, when he wanted them, it would save lots of money, and hard words, too.—C. K. READING, Davenport, Iowa.

The Singer Sewing Machine you sent me, does splendid work. I am well pleased with it.—G. RUFF, Burlington, Iowa.

My bill of goods I ordered from you reached me all right and in good condition —everything as I ordered.—ROBT. HARVEY, Aurora, Ills.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

◆

☞ We always extend the term of renewal subscriptions from the date of expiration on our books. Present subscribers whose time may expire one, two, three or six months hence, can safely renew now, without fear of loss thereby.

Honey for Dyspeptics.—The New York *Tribune* of May 7, has the following item under its agricultural heading:

A correspondent of *Gleanings in Bee-Culture* queries as to whether dyspeptics, or those with whom "honey doesn't agree," ever tried heating extracted honey to the boiling point before eating. He (weak of digestion) found he could use it in this way with less unpleasant after effect. However, certain persons cannot seem to indulge in this luxury without annoying result, though they might, perhaps, by slow degrees, school the stomach to accept of it, and in some cases it is probably the swallowed comb that makes the trouble.

We should advise the use of milk, when the honey disagrees with a weak stomach. Milk assists digestion, and drinking either sour milk (clabber) or butter-milk, is very beneficial in cases of indigestion. It simply tones up the stomach, while the use of honey will give warmth to the system, arouse nervous energy, and give vigor to all the vital functions. Milk and honey are grand things for poor humanity.

Susquehanna Co. Convention.—The report of the recent meeting of this bee-association is thus condensed by the Secretary:

The Susquehanna County, Bee-Keepers' Association met at Hopbottom, Pa., on May 3, 1890, and various subjects pertaining to bee-culture were discussed. H. H. Brown, of Columbia county, being present by invitation, cheerfully answered any questions which those present saw fit to ask. The following officers were elected for the coming year: President, E. B. Smith, of New Milford; Vice-President, C. J. Haight, of Rush; Secretary and Treasurer, H. M. Seeley, of Harford. The following is the number of colonies in the fall and spring, as represented by those present:

	Fall.	Spring.
W. Johnson Baker	54	54
W. A. Green	36	34
S. A. Shook	52	51
P. R. Philips	7	7
Manley Mackey	7	7
D. C. Westbrook	11	11
C. E. Snyder	38	37
A. S. Taylor	42	40
E. P. Mack	8	8
John Buck	15	14
Bela Griffin	75	75
H. M. Seeley	24	22
Mrs. N. Conrad	39	38
C. J. Haight	173	170
E. B. Smith	44	41
A. G. Brush	90	90
G. A. Wright	175	135
F. W. Dean	81	75
G. W. Tiffany	40	40
T. J. Tiffany	17	17
C. D. Bennett	39	38

Harford, Pa. H. M. SEELEY, *Sec.*

☞ We want of Volume 2 of the AMERICAN BEE JOURNAL—July, 1866, to June, 1867. Any one having it for sale may send us a postal card, saying what he will take for it. Do not send any numbers before we order them, for we only need one set.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

QUERIES and REPLIES.

Fastening Foundation in Brood-Frames and Sections.

Written for the American Bee Journal

QUERY 708.—1. How do you fasten foundation starters in brood-frames? 2. How do you fasten them in sections?—Penn.

1. By the use of melted wax. 2. By use of the Parker foundation fastener.—A. J. COOK.

1. I fasten them on wires. 2. By means of the Clark foundation fastener.—C. C. MILLER.

1. I have never used starters in brood-frames; with us, it has been full sheets or nothing. 2. With melted wax.—MRS. L. HARRISON.

1. I use wired frames altogether, and have no trouble. 2. I fasten in what few sections I use with the little Parker fastener.—J. E. POND.

1. By the use of the Eclipse foundation fastener. See Dadant's revision of Langstroth's book, page 375. 2. The Gray foundation fastener is preferable to any that I have seen.—J. M. HAMBAUGH.

1. We use full sheets in our brood-frames, and fasten them in with melted wax and rosin. 2. We use a Giwits press for fastening full sheets of foundation in sections.—C. H. DIBBERN.

We use a common pocket-knife, using a slot to guide the knife; or better, we use the Hambaugh roller to press it on. Every bee-man has his own way.—DADANT & SON.

1. By pressing firmly the foundation against the triangular comb-guide. I have all my frames with this guide. 2. Have a pan of melted wax at hand to dip the edge of the starter in, and then apply to the section. With me, this plan is more satisfactory than the foundation fastener.—J. P. H. BROWN.

1. I make my foundation on wired frames, in a Given press, and run melted beeswax along the top-bar to make all secure. 2. With a Parker fastener; but if I made a business of producing comb honey, I would use Clark's, as recently improved. —A. B. MASON.

I have a contrivance of my own for fastening foundation in frames and sections, which I prefer to any other that I have seen. By it the wax is melted at the edge, and suddenly crowded against the wood. If done with any care at all, the fastening is perfect. In brood-frames I use wire, in addition.—R. L. TAYLOR.

1. The top-bar has a saw cut ⅛ of an inch deep; the foundation is placed in this slot, and fastened with melted wax and rosin. 2. For sections, I use a machine that fastens the foundation with a hot iron; with it, starters or whole sheets can be put in faster, better and cheaper than by any other way that I know of.—H. D. CUTTING.

1. In doing this, I have a block just half the width of the frame, which will just fit *inside* of it nicely. Then I have a thin but strong knife (made of some hard variety of wood), with which the foundation is firmly pressed against the thin strip of wood, which projects from the top of the frame. The foundation should be kept in a warm place until used; and the knife occasionally dipped in honey. 2. For sections, I use, with perfect satisfaction, the Parker foundation fastener.—WILL M. BARNUM.

1. Sometimes in one way, and sometimes in another. Usually, by laying the foundation flat on the under side of the top bar, and tacking on it a thin strip of wood, and then bending the foundation against the edge of the strip, so that it will hang perpendicular. 2. By dipping the edge of the starter in a melted mixture of beeswax and rosin.—M. MAHIN.

1. I use a frame-holder to keep the frame in proper position, and press the edge of the starter fast to the top-bar with a common putty-knife. The starter is then bent to the proper position. Full sheets are fastened in the same way, except they are treated to warm wax on the opposite side, to prevent the tendency to peal off when weighted with bees. 2. I use an improved "Parker fastener," of my own devising, that does the work effectively and rapidly. —G. W. DEMAREE.

To fasten foundation in brood-frames or sections, and do it expeditiously, requires skill and practice by any method to do it as it should be done. If there is a more rapid, economical, or better method than the one given in my new book, by the use of melted beeswax and a suitable camel's-hair brush, I should like to know it. At all events, fastening the foundation in 200 sections per hour is fast enough.—G. L. TINKER.

1. If whole sheets are used, wired frames are best. If only starters, melted beeswax used as with sections. 2. I have tried various foundation fasteners, but never any plan has succeeded better than a basin of melted beeswax kept at the proper temperature over a lamp. A block half as thick as the section is wide, and nearly as large as the section when folded, nailed on a larger one. A small brush is kept in the melted wax. With one stroke, the starter can be fastened in so thoroughly that not one in a thousand falls. The work can be done quite rapidly, too.—EUGENE SECOR.

I have always fastened foundation starters in brood-frames with a putty-knife. My employe will put on from 75 to 100 per hour, and put them in nicely. We have a little wooden form fixed to support the frame just right, and adjust the foundation to the right place in the frame. Probably, if I was beginning in the business, and using foundation-guides, rather than full sheets on wires, as I do use, I should use a large fastener, made upon the lever principle, the same as the Parker, which is the one we use for putting foundation in sections. Right here let me digress to say, that a foundation-guide 4 or 5 cells wide, before it is mashed on, and 3 or 4 cells after being mashed on, is much better than a guide 2 or 3 inches wide. Try both ways, and you will see the reason why.—JAMES HEDDON.

1. If the top-bar of the frames is triangular, cut in the upper edge of a pile of the foundation, with a sharp knife about an inch from the top edge, and from one end to the other about 2 inches apart. Then take a sheet and bend each alternate piece thus cut forward, and bend back the other alternate pieces; then these will fit over the thin edge of the V top-bar. Press into the wood with a knife, chisel, or any suitable tool. 2. Use a Parker foundation fastener.—THE EDITOR.

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey—Its Flavor, and How to Secure It.

Written for the American Bee Journal

BY T. F. BINGHAM.

The first requisite of extracted honey is that peculiar to all fine honey, whether extracted or in the comb, namely, delicious flavor. It is not because honey is so sweet, that honey is so sought after, neither because so beautiful, but from its peculiar flavor.

It is true that those buying honey buy that which is the lighter in color, but the color is used as a number, trade-mark, or brand, the association of which with the taste of the purchaser is linked that most fascinating odor and combination of acids and sweets upon which is based true epicurean taste.

Once master of those qualities and combinations found alone in honey, a high degree of excellence in the commodity can alone maintain its lofty position as a dainty luxury of the most appetizing kind.

It is not too much to state that honey, as honey, does not always meet the gastric delight anticipated by the purchaser. It is this disappointment that has brought extracted honey to its market rate, and widened the measure of values between honey in the comb and combless honey.

Having touched at a few salient points relative to the reasons why honey holds a higher market value than sugar—that merely sweet commodity, so much prized because it has nothing to render it more than a culinary necessity—it may be well to state that while sugar is simply sweet, that is its greatest recommendation as an essential in cookery. Had it flavor, however delicate or peculiar to itself, yet no greater or more delicate than the choicest honey in the comb, it would be objectionable as a sweetener.

The delicate flavor of that most-prized table luxury—tea—would be obliterated by the stronger flavor of the sugar, and tea would become to all as it now is to the older users of it—only prized when not sweetened. Thus it will be observed that only the deodorized or granulated sugars are used to sweeten coffee or tea.

With the foregoing carefully kept in mind, the easy analysis of those peculiarities found in the choicest comb honey, which exalt it so high in the realm of pure and healthful luxuries, will be at once understood. I shall not attempt to explain in detail why "extracted honey" as a phrase has failed to touch the public heart as a term or phrase signifying honey; I do not mean to be understood that "extracted honey" is adulterated, or that it ever has been, but that, as a rule, without adulteration it signally fails to make for itself a perennial market.

Careful effort has led me to regard the extracted-honey market as an appendage due to comb honey, which has, in spite of every and all efforts, maintained in the public mind a realization of the old and oft-repeated quotation—"Sweeter than honey and the honey-comb."

To those not expert in the kinds or varieties of honey, a clear and distinct conception of it cannot reasonably be supposed to exist, hence the easy and natural confidence reposed in that sweet word "honey!"

While the innocent purchaser does not feel that he has been imposed upon or deceived in his purchase, he does not fail to realize that either honey differs, or the tastes of its devotees differ widely from his.

I will now use a parallel industry and some of its methods, to illustrate in part how this thing that we have so long tried to show is not strained honey, does not help us to explain. The cane-planters of Louisiana understand perfectly well what portion of the blue cane makes the refined sugar; also that the very hour and moment that the sweet juice is pressed from the air-tight stalk, that juice must be boiled, else it will yield very little refined sugar.

The careful analysis of the expert methods of maple sugar manufacturing, demonstrates how valuable is time, and how fatal the exposure of sap before boiling, in the production of a strictly No. 1 sugar. Yet we notice bee-writers advocating the extracting of honey before the combs are sealed, and exposing this "green" nectar in open vessels to undergo evaporation without heat in order to ripen. What would a sugar maker say of such advice? What sage has succeeded in finding out in what respect the juice of flowers differs from the juice of the cane or the sap of the maple?

I assume without fear of controvertion, that until the same rational methods are brought to bear upon the production and management of combless honey, that obtains in the management of cane and maple sugars, there will remain the same reasonable distaste for "extracted honey," and the same futile effort to show that extracted or fluid honey is not "strained honey," that has clung to the liquid article ever since the invention of the extractor.

Musicians sometimes have recourse to a little simple instrument to enable them to judge of tone, or to place their voice or instrument in the proper key; if those, who wish to determine accurately the quality of combless honey, will obtain a choice one-pound section of clover honey—all *sealed*—and after taking it from the section pare off that portion of the comb which joins the section on all four edges, so as to remove every possibly unsealed cell; then place the remaining comb in a thin, clean strainer-cloth, and hang in a warm place until the whole is warmed to a point at which the honey will run freely, and then crush the comb and press out the honey at once, they will have a test or "tuning-fork" by which to judge of the character and flavor of combless honey. If, then, it should be desired to keep or preserve for future reference this standard, place it in a vial which it will completely fill, cork tightly, and place in a cool, dark place.

Now, whenever a doubt exists as to whether liquid honey is as good as it is possible to have it, sample it beside the test, and decide by the standard. I need not say that such honey would soon make for itself a market, and do away with the cry of adulteration, so much used in connection with extracted honey; neither that the market could be glutted with it. Every bee-keeper knows that there could be but one answer.

By the above, first, I trust that it will be understood that good combless honey cannot be obtained by extracting nectar or unsealed honey; second, that combless honey, if properly managed, is simply separated from the comb, and in no sense different; and third, that the degradation of nominally extracted honey in demand and price, is due to its injudicious treatment.

Abronia, Mich.

FOUL BROOD.

Bulletin by the Michigan Agricultural College.

BY PROF. A. J. COOK.

By special request of several bee-keepers, I am led to issue a bulletin upon this the most serious malady that ever attacks bees in this or any other country. The problem of safe wintering, once so important, is now solved, and the intelligent apiarist feels no longer any dread of winter's cold. Foul brood is now the bee-keeper's terror. Like the cholera—a disease which is close akin to foul brood—

amoung our own kind, so this disease comes into the bee-community like a terrible scourge, and if the bee-keeper is ignorant, incautious, or indifferent, it abides with him until it starves for want of bees on which to feed. Terrible, and terribly fatal as this disease is known to be, experience has proved, certainly, that with full knowledge, and as great care, it can be kept in check, and wholly cured, and that with not very serious labor and expense. The very nature of the disease makes CAUTION *the* ALL IMPORTANT *thing in its management and cure.*

FUNGOID DISEASES IN GENERAL.

Foul brood, like the Asiatic cholera, tuberculosis, swine plague, etc., is the result of the growth and development in the animal tissues of myriads of very minute microscopic plants, which are called micro-organisms, or microbes. The disease, like consumption, Asiatic cholera, swine and chicken cholera, etc., which result from the presence in the tissues of such organisms, are called "fungoid," as the organisms that produce them are fungi, which reproduce by division or fission. Thus the little, rod-like or spherical bodies separate into two precisely similar parts, and there are two instead of one organism.

Many animals reproduce in the same way. Some of these also develop round, seed-like bodies, called spores; these are very minute, and, if placed in the proper seed-bed, will again develop into the mature, larger microbes. These spores, the microbes' seed, are exceedingly minute. Thousands might be on dress parade, and yet, so many, shoulder to shoulder, they could not be seen unless the microscope were called to our aid.

Again, they are very persistent. Dried up, they will live for years, may be ages, ready, if properly sown on the right soil, to again produce the swarms of life, that feed on death. Hence the danger; hid by their very minuteness, they come all unrecognized, and find no fences to stay their progress.

The endurance of the spores—often retaining their vitality for years in some dry crevice or corner awaiting in a dried-up dormant condition, the proper conditions (a suitable soil, if we may so speak), when they will develop, increase enormously, and again bring death and disease—also makes these micro-organisms able to work the most dire mischief. Thus the subtle nature of these spores, their invisibility and persistence is what makes the diseases they cause so alarming and so dreaded. They come as still as the death they cause; their very presence is unknown until their frightful work is accomplished. Hence it is that such perfect knowledge, and absolute caution is necessary to combat these fearful plagues.

It is one of the chief glories of Science that she has unveiled the mysteries of these tiny destroyers, and revealed the sword that shall lay them low. These micro-organisms are separated into different groups from their form, etc. Thus the micrococci are globular, and reproduce by division, in which process they assume the form of a dumb-bell. The bacteria are chain-like, or in form of short rods, while the genus bacillus, which includes our foul brood microbe, contains organisms that are in form of straight rods or filaments. The other genus, spirillum, contains spiral forms which move by a curious and interesting augur-like motion. All of these cause decomposition of the material on which they work.

The substances that arise in this decomposition either go to nourish the microbes, or are given off as excreta, just as we excrete carbonic acid in our life economy. Thus in sweet liquids, these cause fermentation, as when cider changes to alcohol and then to vinegar. In meat and other dead animal-tissues they cause putrefaction. Rot then is simply the feeding of countless millions of these micro-organisms on the tissue that is decaying. They cannot work in the absence of spores, heat or moisture. Hence by heating our fruit to kill the spores, and then sealing to keep the spores out; by drying our meat, and by placing it in refrigerator cars, we make it impossible for these microbes to work, and so prevent decay.

The forms that live on live animals and tissues, just as truly produce decomposition, disorganize the tissues, and thus cause disease, may be death. Such are the microbes that produce cholera, consumption, and diphtheria among people, and foul brood among bees.

From the very nature of these micro-organisms we see that it is incumbent on us (would we fence them out) not to introduce the spores, the seeds of these most terrible weeds; to prevent the spread of seeds if the organisms are once introduced; and to destroy the organisms when once they gain a foothold. The first two points—keeping them off and preventing the spread—are the most important. This requires great care and caution; but with full knowledge of all the facts, is doubtless entirely possible.

Thus we have reason to hope and expect, that with fuller investigation, we shall be able to escape some of the very worst maladies that now afflict our race.

WHAT IS FOUL BROOD?

This is the result of the growth and development in the brood of bees, of a bacillus, which has been named by Mr. Cheshire, "bacillus alvei." These bacilli look like short rods, and when magnified 1,000 times, appear about one-fourth of an inch long. Thus we see that they are exceedingly minute—only 1-4 000 of an inch long; and yet the spores are even smaller—from one-third to one-half as long. I have stained specimens taken directly from diseased brood, and from cultures in tubes, where a little of the decayed brood was placed in preparation of beef decoction. In this last case the media in the tube was soon swarming with the bacilli. All look just alike, and just like those from the decaying brood.

If we take a section of a rather small black pin one-fourth inch long, we will have just about the appearance of these stained foul brood bacilli. From what we have already learned by these organisms in general, it is easy to study this special foul-brood bacillus. The minute ovoid spores are brought to the hive probably in honey fed to, or brought in by, the bees. It is easy to see how honey in a diseased colony of bees would receive these spores. It is difficult to see how it could be free from them.

The spores might also be introduced by giving combs containing the diseased brood, or which had previously contained it, to the bees, and so now would have the dormant bacilli or spores. Undoubtedly foul brood is usually first introduced through the honey, while it is often spread rapidly by an exchange of combs in an apiary where only a few of the colonies are affected. While the bacillus cannot develop in the honey, very likely the honey serves admirably to hold and preserve the spores.

APPEARANCE OF THE BROOD.

When the larval bee is once affected, it is disturbed, lies differently in the cell from the healthy larva, soon turns yellow or straw color, then to brown, while the skin seems loose and flabby. Later the mass becomes thick and viscid, and turns dark brown, the color of coffee before any cream is added to it. It then dries up, and at last forms a thin layer over the bottom of the cell. While in the putrid coffee-colored state, if drawn out from the cell by inserting into it a pin-head, it is stringy, and if it fails to hold to the pin, it will fly back. This brown, stringy, elastic mass, with no resemblance to a larva or pupa, is, I think, a sure proof of the presence of the dread malady.

The larva may never be capped over, but if attacked late in its development, it usually will be. This cap, however, will appear sunken or concave, instead of being convex or rounding out as the cappings of brood always are when the brood is healthy. These sunken caps are always suspicious, and should always lead to close investigation. Little, irregular holes in the cappings are often observed, which also should awaken suspicion.

Another indication, not always marked in the early stages, is a rank smell, which has been compared to the odor of decaying brood that has been chilled. Often this odor, in severe cases, is very marked, and can be detected while the hive is closed, and several feet from the one perceiving it. I have had many samples of foul brood sent me, and often my children would speak of foul brood, detecting it by the odor, even before the package was opened.

We see, then, how we may surely determine if our bees have this terrible malady. If the bees languish, *and we find the dark, stringy, salvy mass, which is elastic,* in the cells; if many of the caps are sunken and pierced with irregular holes, then we may be sure of the presence of foul brood. If the foul, nauseating odor is present it will also aid in the determination; though it will not be very conclusive early in the attack, before the affection becomes extensive.

Mr. Cheshire thinks that the mature queen, workers and drones are also subject to attack, and frequently succumb to the disease. He thinks he has taken spores and the bacilli from the blood of the bees, and the spores from the eggs of the queen, which he took from the ovaries before the eggs were laid.

Senator R. L. Taylor, of our own State, President of the International Bee-Keepers' Association, who has had an extended experience with foul brood, and has conquered it, also thinks that it attacks the mature bees. If this be true, it is hard to explain the most satisfactory remedy, which on the hypothesis that the disease is confined to the brood, and the spores to the honey and cells, is very easily explained.

That the dry spores are not wafted by the wind from the hive, seems evident from the fact that colonies adjacent to diseased ones seem no more likely to contract the disease than those in distant parts of the bee-yard. This, in connection with the fact that robbing spreads the disease rapidly, seems to show that the contagion is carried in the honey.

PREVENTING AND CURING FOUL BROOD.

It goes without saying, that we should be very careful not to introduce combs, or honey from diseased colonies into our apiaries, or permit our bees to gain access to such comb or honey; neither is it best to get bees from foul-broody apiaries, for though it would seem that the bees cannot convey the malady, yet it might come in comb or honey.

For like reason, in case foul brood comes into our bee-yards, *we must quarantine all diseased colonies, and spare no pains to prevent the bees from healthy colonies getting either at the honey or comb from the foul-broody hives.* We must remember the subtle nature of the enemy, the vitality and minuteness of the spores, else we will not practice the caution necessary to prevent the spread of the disease.

Only the most extreme caution and painstaking, when foul brood is once introduced into an apiary, will prevent its spread to the entire apiary. Handling the bees at all, and especially if the bees are not gathering, and so will be fiercer to rob, is very likely to spread the disease. It is all-important that the apiarist knows the imminent danger of the disease spreading, in case it gains a foothold in his apiary, and regulate all his work accordingly.

REMEDIES FOR FOUL BROOD.

It is often suggested that all diseased colonies can be destroyed—either burned or buried—as soon as the disease is detected in an apiary. For the ignorant or careless, either or both, this is the wisest counsel. For the intelligent who will study into the matter fully, and practice the necessary caution, it is not wise or desirable. Two substances, long known as powerful fungicides, have been successfully used to conquer foul brood. One is a dilute solution of salicylic acid, the other a solution of carbolic acid.

Mr. Hilbert, of Germany, who was among the first to use salicylic acid, dissolved the powder in ten times its own weight of spirits, and one drop of this in one grain of water was used to spray the uncapped brood.

Mr. Muth mixes borax with the acid, when it is soluble in water. He uses 8 grains of each substance in one ounce of water. This is thrown on the diseased brood, and, to be effective, must of course touch every affected larva—every colony of the death-dealing bacillus. In actual practice, it seems so difficult to be absolutely thorough, that this remedy does not give satisfaction.

Mr. Bertrand has found success in fumigation, by heating salicylic acid and forcing the fumes over the uncapped brood. The fault with this is the same as with spraying—unless *very thorough*, it fails of success. It is however well to mix this solution with honey or syrup, and feed it to the bees. This prevents the disease sreading so rapidly—simply holds it in check till cured.

The carbolic-acid remedy, although previously used with success, has been more thoroughly employed by Mr. Frank Cheshire than any one else. Mr. Cheshire sprays with a 1-50 solution of phenol-crystals of carbolic acid —and pours on and around the brood 1-500 solution of the same. The aim is to touch all diseased larvæ with the solution, and also to feed the bees with medicated syrup, that spores and mature microbes may all be destroyed. Without doubt this remedy is good in theory, but like the salicylic acid, it is not usually satisfactory in practice. It is found to hold the disease—or the enemy—in check, but it often fails to exterminate it.

It would seem from the reports in America, even from our most careful men, that it is difficult to make this treatment sufficiently thorough to root out the disease. Like salicylic acid, so, too, carbolic acid, or phenol, as it is often called, is helpful to feed in syrup to the bees, as it seems to hold the malady in check; and also very excellent as a wash which the apiarist should always have at hand. After handling the combs of a foul-broody colony, the bee-keeper should at once wash his hands in a dilute solution of one of these substances, that he may run no risk of spreading the disease.

TRANSFERRING FOR FOUL BROOD.

Years ago that astute and justly renowned bee-keeper, Mr. Quinby, announced the "fasting method" to cure "foul brood." He drummed the bees out of their hive into any box, then placed them in a cellar till they were nearly famished of hunger, then he "run them" into a clean hive on untainted combs. With sufficient care, he found this invariably a sure cure.

Mr. D. A. Jones, Dr. A. B. Mason, and many others have confirmed this statement of the great New York bee-keeper. It would seem from this, that no disease or disease-germs could rest upon or dwell within the bees; that *all must* exist either in the honey, the brood, or in and about the cells. Of late, many bee-keepers have shown that the delay and fasting are not necessary. If the bees are simply "run into" clean, untainted hives, either upon foundation or empty frames, they escape the disease, and are cured. This would show that even if the honey is consumed before there is young brood to feed, all danger is escaped—the colony is cured.

The best time to cure foul brood is during a honey-flow. Then there will be less danger of robbing, and, as we have seen, robbing is one of the most ready ways to spread the disease.

About four weeks before the probable end of the honey harvest, cage the queen inside the hive. As soon as the brood is all developed, place a new hive where the old one stood, filled with foundation, and shake the bees, queen and all, in front of this hive upon some paper that can be burned. This must be done under a bee-tent, or at nightfall when the bees have all ceased to fly. *We cannot be too careful* to prevent spread of the contagion.

Now burn the papers, extract the honey, and melt up the combs. The honey may be boiled and fed back to the bees; but if not boiled, great care must be taken that the bees *do not get any of it*. The old hive may be placed for some minutes in boiling water, or else burned. No bees must be permitted to visit it until it is boiled. If we discover affected colonies after the honey-flow, we had better leave them till a subsequent harvest, or till the next season. Else we must, by use of of a bee-tent, distance or time—late in the day—be absolutely certain that in our manipulations no other bees are exposed.

When bees are idle and fierce to rob, the danger is so great that only the greatest caution would make it safe to attempt treatment out of the honey season. The object of caging the queen is, that it makes only one operation necessary, and so lessens the danger. In extracting the honey from the diseased colony, great caution is likewise required that no bees get to it, and so contract the disease. In case colonies are kept over for treatment until the next season, they should be fed the medicated syrup—salicylic-acid solution—inside the hive after nightfall, and every caution taken to prevent robbing. Bees must be kept away, or the disease will spead all through the apiary.

It seems strange that with the readiness of this malady, from its very nature, to spead, and with the bee-trees in the forest, which are beyond our control, that the malady once in a locality does not always remain there. The disease was once terribly virulent about Detroit, Toledo, Jackson, etc., yet now these localities are free from the plague. It seems that the disease dies out in time, just as cholera, yellow fever, etc., disappear. Why it lets go its grip, is not understood.

If the honey is not the bearer of germs, as Mr. Cheshire believes, it is hard to understand why feeding it so rapidly spreads the disease. If the old bees and queen bear the germs, and are victims to the malady, as both Mr. Cheshire and Senator Taylor argue, it is hard to understand how the transferring remedy is so effective as all who have used it concede it to be.

THE NAMELESS BEE-DISEASE.

Within the past few years much complaint has been made by bee-keepers, of a disease among bees, which not only depleted the colony, but was made manifest by the appearance of the diseased bees. They look black, because of loss of hair, much as do robber bees, or old bees in spring, and frequently make strange motions in front of the hives, as though dancing or in convulsions. They are frequently dragged out of the hives by the other bees.

This, like foul brood, is supposed to be due to fungoid attack. In this, only the mature bees seem to become victims, though the inoculation appears to come through the queen. Thus it is found that superseding the queen with a healthy one, cures the malady. It is also reported that abundance of salt water placed close by the hives, where the bees can gain ready access to it, will cure this "nameless bee-disease."

It would seem that this malady is the same that has received attention in Europe, and which Mr. Cheshire has said was due to the attack of bacillus gaytoni.

Agricultural Coll., Mich., Apr. 15, 1890

BEE-FEEDERS.

Need of a Feeder for Winter and Spring Use.

Written for the American Bee Journal

BY S. J. YOUNGMAN.

Bee-keeping has made wonderful strides in the past quarter of a century. This was forcibly brought to my mind while recently talking with a gentleman living in Greenville, Mich., and well acquainted with some of its early history. He was speaking of Mr. Moon, who was trying to enlist interest in the Harbinson hive, in that vicinity. Having a knowledge and experience at that time far above the average bee-keeper, he soon had some of the business men interested, and he soon made a sale of the State of Minnesota, to Manning Rutan, a wealthy merchant, for a mile square, or 640 acres of pine timber land near Greenville. Although not very valuable at that time, if the timber was now standing, it would be worth $200 per acre, or $128,000. The hive used by him is still in existence, and in a good state of preservation, and would be a good relic for the BEE JOURNAL Museum.

But I think that while some parts of bee-keeping are having more than their share of thought and consequent invention, other parts have been sadly neglected—for instance, the simple thing of spring feeding of bees, which is sometimes an actual necessity, and I believe it would pay to feed all colonies in early spring, if some cheap, simple and easy way was provided to do so. I think that if some of our inventive geniuses will carefully read the article by Robert Carver, on page 278, they will see a chance to construct a much-needed article for the modern apiary, namely, a good, handy, simple, cheap bee-feeder.

The frames of nearly all the hives in this latitude, at the time that the inmates need feeding, are covered with some kind of protection, either of chaff or cushions. Now nearly all bee-keepers will acknowledge that the bees should be fed on top of the frames, over the cluster. The facts are, that not one-tenth of the bees are fed when they should be, on accout of these cushions, etc., being in the way, and with the style of feeders now in use, there is no way of getting to the frames without giving an outlet for the escape of the heat so much needed for brood-rearing at this time of the year.

This feeder can be made of tin or wood, or both; put on in the fall, with the tube protruding up through the packing, no heat can escape, and the feeder is in place, ready for use at any time.

Bees here in Michigan usually gather large quantities of pollen in autumn, and, if wintered outside, they commence breeding in March; but brood-rearing is often greatly retarded even in May, for the want of nectar during a cold spell. Although plentifully supplied with pollen, at these times they should be fed.

Bees wintered here on the summer stands in fine condition, and are breeding up and doing finely, although fruit-trees are not in bloom yet. Cellar-wintered bees are in bad condition, many having perished, and are dwindled badly.

Lakeview, Mich., May 5, 1890.

SWARMS.

Self-Hivers and Swarm-Catchers —The Drone-Trap, etc.

Written for the American Bee Journal

BY HENRY ALLEY.

So much interest has been shown in self-hivers recently described in the bee-periodicals, I am sure that the readers of the AMERICAN BEE JOURNAL will be interested in anything that is new, or even in an old device, provided it is made to do other work besides that for which it was originally designed.

Below I give a description of a new use for the drone-and-queen trap—an article thousands of the readers of the American Bee Journal must have in use. Those who have them in use, and have seen them catch a queen at swarming time, have noticed that when the bees returned after missing their queen, as many of them as could would crowd into the trap with the queen. The idea struck me that the trap might be made large enough to hold all the bees and the largest swarm when they issued.

Figure 1 shows the trap attached to a Bay State hive. You will see that it projects considerably beyond the front of the hive. The bees, to gain access to their hive, must pass under the trap and enter through the metal (A).

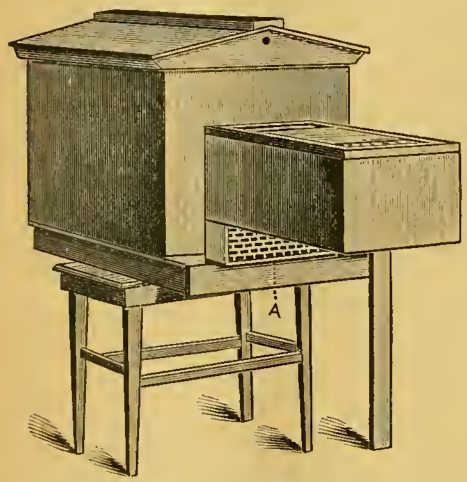

Fig. 1.—*Trap Attached to a Hive.*

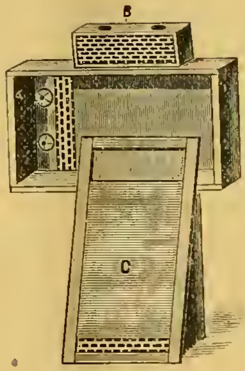

Fig. 2.—*Our New Self-Hiver.*

Figure 2 shows the interior of the Catcher. It is the same as the drone-trap. In fact, it is nothing but the drone-and-queen trap on a larger scale. Instead of being made just large enough to hold a pint of bees, the trap will hold the largest swarm likely to issue from any hive.

The trap has a portable cover (C), so that when a swarm has been hived, the bees can be quickly removed to a new hive. This device may be attached to the hive in a dozen different ways, to suit the fancy of the apiarist. It will be seen that there is a stake (D) driven in the ground under the front end of the trap, for the box to rest on.

B, as shown in Fig. 2, is a box, open on one side so that the bees can enter, while the opposite side is covered with perforated metal. This represents the bottom chamber of the drone-and-queen trap. Two cone-tubes are used for the bees to pass into the trap from the hive.

We stake our reputation as a bee-keeper on the statement that this trap will catch 99 out of every 100 swarms that issue. The queen will enter the trap, and when the bees return in search of her, they will readily find her ladyship in the box and ready to receive them.

You will notice in the trap (Fig. 2), and just ahead of the tubes, a strip of perforated metal. This is so arranged that it is exactly over the metal (A).

When the bees return after having missed their queen, they will pass into the trap through the metal and join their queen. Here the bees will be found on the return home of the apiarist, when they can be disposed of to suit his pleasure. If no hive is ready, the box can be placed on the stand the bees are to occupy, and hived when most convenient. If the bees are to be returned to the hive they issued from, this can be done after the combs have been examined and the queen-cells removed.

Wenham, Mass.

MANIPULATION.

Management of Bees—Honey-Plants, etc.

Written for the American Bee Journal
BY C. RUSSELL.

I commenced the season of 1889 with 42 full colonies, to be worked for comb and extracted honey, and 5 weak colonies to be divided later in the season, for the fertilization of queens. Thirty colonies had been wintered on the summer stands, and as the winter had not been severe, when spring arrived they were in the pink of condition. The rest were wintered in the cellar, and were taken out in good condition at the first appearance of natural pollen.

My spring management commences now, and is something like this: I examine each colony to ascertain its immediate wants—first, to see if they have plenty of honey to last them for 2 or 3 weeks, and, if not, a comb of honey is given them; second, to see that no dead bees are lodged between the combs, and that they have a good, fertile queen.

In place of the Hill's device and the cotton cloth over the frames, I spread the enameled cloth over this 15 or 20 sheets of paper (in book form), then over all a 4-inch rim with a cloth bottom nearly filled with chaff. My object in doing this at this season of the year, is to prevent, as much as possible, the escape of heat and moisture, as both are essential in order to carry on brood-rearing successfully.

At the next examination, which should be done in 10 days or 2 weeks, I often find it necessary to remove such combs as the bees cannot well cover. It often happens that the hives do not contain more than 5 or 6 frames, with a close-fitting division-board at the side; in a short time these will be well filled with brood, and I then place in the center (if the weather is warm, and plenty of young bees are in the hive) a comb containing some honey; this I uncap, and continue to fill in, in this way, as they need room, until the 9 frames are well filled with brood. Some do not advise spreading the brood, but with a chaff-hive entrance well contracted, and covered warm on top, I have been successful.

With the above management, by June 1, the 42 colonies were overflowing with bees, and the combs nearly solid with brood.

A glance now at the brood-nest would show the apiarist that the swarming season was at hand. A few days later it commenced in earnest. Previous to last year I had been successful, after giving plenty of surplus room, by simply cutting out the queen-cells and returning the swarms. A few trials convinced me that this was a failure. Then I tried the following:

I hived swarms in hives that had cast swarms 4 or 5 days before; this did no better than the first. Next, I killed a few of the poorest queens at the time they swarmed, and at the same time I cut out all the queen-cells that were capped. Eight or nine days later (or after all the brood was capped), I again cut out all the queen-cells. Then I hived swarms in these hives, gave plenty of room, but all swarmed within 3 days.

Then again I introduced young laying queens to colonies that had been queenless eight or more days, and on examination a week or so later, I found they, too, had queen-cells well started. All this time they were making just about a living—some storing a little in the sections; but the weather was so wet that they could not do much except rear brood and swarm.

It was now about the first of July, and for nearly a month I had had the worst trial of swarming that I ever knew. I was quite sure now that nothing short of a good honey-flow would check this swarming fever; but with the force of workers then on hand, I expected a crop from the basswood, if the weather was favorable, for it was budded unusually full. A few days later it commenced down the valley at first, and, as the weather was favorable, they did about the best work of the season, and carried the honey a couple of miles.

The swarming had nearly ceased; the sections (30 5¼x5¼, or 50 pounds capacity) on each hive, perhaps would average one-half full. I ventured now to tier up about one-half of the very strongest colonies. The weather following was not quite what I wished it to be, but when it did clear up a little, they would show the same energy for storing honey that they had done at swarming. As the season advanced, I saw by their line of flight (which was towards a high, cold mountain) that the basswood season was of short duration. On examination, I saw that while some colonies had the sections all full and nearly capped, others would need more time than they would have from the basswood. The day following, in the forenoon, when most of the old bees were in the field, I removed the sections from such hives as had them nearly completed. These I placed near the entrance, and in a short time nearly all the bees had returned to their own hives.

Then from those with the partly-filled sections, I removed bees and all, and placed on the hives of the former. This, as will be seen, gave them nearly a double working-force on the partly-filled sections, and while they were being filled very rapidly, the ones nearly capped were being completed on the colonies from which I had taken the partly-filled ones.

When the above is practiced, both colonies should have a fertile queen, or fighting would be the result. I practice nearly the same plan with those that are a little slow to enter the sections.

As the buckwheat season was fast approaching, I removed the white honey from the hives, and found nearly all of the sections well filled. I had over 3,200 pounds of comb and extracted honey, three-fourths of which was comb.

On account of the wet weather again I did not secure as much buckwheat honey as I sometimes have done, but I had something over 1,000 pounds. This made the average yield a trifle over 100 pounds per colony.

HONEY-PLANTS FOR BEES.

Although I have secured only three crops in the past eight years from the basswood, I must place this at the head of the list, for I never have been able to make a very good showing without it. It blossomed quite well here in 1888, and while some got quite a crop, even in this county, it was an entire failure here.

The buckwheat I have never known to fail to produce some honey—I think I have taken as high as 40 or 50 pounds per colony from it. The honey being dark, it usually sells for 4 or 5 cents per pound less than the white.

We have considerable white clover here, but as yet I have seen only one good yield from it. The raspberry produces some honey nearly every season.

About Sept. 1, of last season, there was considerable honey gathered from the golden-rod. I have never known bees to work on it only one season before. This may be on account of the early frosts we usually have here.

IMPORTANCE OF GOOD QUEENS.

I consider the queen the most important factor in successful bee-keeping, and I have had excellent results with crossing the best Italian strains, and from such a cross last season I obtained 150 pounds each, of comb honey, from a few choice colonies. An examination of the slates showed that all these queens were sisters. Now while I have had queens do good business at four years of age, I have had them fail early in the season at three years; and by so doing, have about ruined the white honey crop of the season; for if ever I want a queen at her best, it is through the month of May.

I will say by way of summing up, that most of my young queens are kept in strong nuclei (of which I had over 20 from the 5 weak colonies first mentioned), until near the end of the honey season; then, after introducing to full colonies, they are kept two years, and no more unless selected for queen-mothers.

When I used to let the bees supersede their queens, although one-fourth or less of the hives would contain old queens, it often happened that 50 or 75 per cent. of my weak colonies in the spring would contain queens of this sort.

I intended to give my method of queen-rearing, but this article is already too long. I know that the above is not all "according to the books," but it is what I practice in this locality.

In regard to my bee-escape, illustrated on page 211, I will say that if a one-inch hole through the tin at A A (where the bees enter the escape) be too small, this could be made any size; and should there be any objection to the inner triangle being made of wood (which I do not think there will be), this could easily be made of a strip of tinned wire-cloth, with a little of its edge turned at right angles, to be soldered to the tin before this is nailed to the top of the escape-board..

Conesville, N. Y.

MICHIGAN.

Report of the Ionia County Bee-Keepers' Convention.

Twenty-five members of the Ionia County Bee-Keepers' Association were present at the meeting held in Ionia, Mich. The meeting was called to order by Secretary Smith, and Geo. E. Goodwin, was chosen Chairman.

The Secretary's report was read and approved. The report showed an aggregate of 743 colonies owned by members present, fall count, and 756, spring count; comb honey produced in 1889, 22,460 pounds; extracted honey, 5,060 pounds; beeswax, 224 pounds. The present condition of bees was reported the best for many years. This showing comprises about one-fourth of the bee-interests of Ionia county, and shows it to be quite an important industry.

The following were elected officers for the ensuing year: President, A. N. Hall, of Ionia; Vice-Presidents, G. W. Stanton, of Sheridan, and Isaac Badder, of Ionia: Secretary and Treasurer, H. Smith, of Ionia.

The "Size of sections and separators" was discussed; also "Restraining increase," and "Quality and kinds of honey, and price and market."

The convention adjourned to meet on the second Wednesday of September, 1890. The President and Secretary, by request, will prepare a programme for that occasion.

H. Smith, *Sec.*

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and place of each future meeting.—The Editor.

◆

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM
OUR LETTER BOX

Splendid Prospects for a Crop.

We have a splendid prospect for a good honey crop. White clover is all we count on for surplus. I have 80 colonies of bees in good condition for the time of year. I put about 2 bushels of sawdust around each hive, to keep down grass and weeds. Is it a good idea? I have a good home market—never send any honey away. I read the Bee Journal more and more.

Ed. Goff.

Ashland, Ills., May 8, 1890.

◆

Good Prospects for White Clover

So far as heard from, 85 per cent. of the bees in Green county, Ohio, have wintered well. We have just passed 10 days of cold, rainy weather, accompanied with strong cold winds. Brood and drones are perishing by the thousands. No doubt bees that are neglected, will starve before clover blooms. The prospects for white clover are good. I have 56 colonies ready for the harvest, to-day.

C. E. Woodward.

Xenia, O., May 12, 1890.

◆

Examining Colonies in Spring.

Generally about the first week in May, I go over the entire apiary and examine the condition of each colony, and make a note of it in a small book, all the hives being numbered. This examination I make just as soon as all danger of wintering is passed. Those colonies that I find have plenty of honey and bees, I note down as in "good condition;" colonies that are weak in bees and short of stores are classed as "weak and need attention." This latter class includes all queenless colonies, and those that need help in any way. This record, if properly kept, will show valued information, and at any time the number of colonies the bee-keeper owns, and the condition of every hive in the apiary from year to year, without the trouble of examining each and every hive every few days. About ⅞ of all the bees are dead in this locality—mostly due from starvation. The winter has been a mild one, but bees did not obtain honey sufficient during the fall months to last them through. We have lost quite a number in summer hives, but very few from those that were wintered in chaff hives.

J. M. Young.

Plattsmouth, Neb., May 8, 1890.

Condition of Bees in Maine.

With the exception of one weak, feeble colony, and 2 that are queenless, my 61 colonies of bees have wintered admirably. The queenless colonies are rearing queens, which will be ready for duty as soon as the drones, now beginning to emerge, are old enough to perform their functions. The lost colony was the remnant of a colony that was robbed last spring, and were probably queenless when put into winter quarters, and should have been united with another colony; but as it was too late to do so when I got to them, I concluded to let them go on the "hit or miss" system. My bees are in the winter packing yet, and will probably remain so a week or two longer, if Spring does not assume a more genial countenance than that with which we have been greeted to this date. At present the outlook for a bountiful honey crop is certainly not propitious, and a change for the better must come soon, or the bee-industry in this section, the coming season, will be a repetition of the three seasons preceding.

J. F. Latham.

West Cumberland, Me., May 12, 1890.

◆

An Experience with Bees.

The winter loss of bees in this vicinity was less than 5 per cent., and there has been no spring dwindling. Though the spring has been cold and windy, the bees have reared brood well. My neighbor had a swarm on April 30, which did well. The weather has been very unfavorable during fruit-bloom, and bees that were short of stores have required feeding. I am nearly 60 years old, and all my life I have given bees a wide berth, until 3 years ago a bee-friend slipped a colony into my yard when I was not at home. For one year I respected them from a distance, for my friend's sake, but got no honey or increase; the next year it was the same, but the third year there was signs of a boom among the bees. I began to read the Bee Journal, became interested, and ventured a little closer to the hive, and soon began to handle the bees, when friendship soon ripened into love. Next I got a few frames of honey, which pleased my wife, and when fall came I had secured over 100 pounds of honey, and put 5 colonies into winter quarters. I am now the worst "bee-crank" in Indiana.

J. A. C. Dobson.

Brownsburg, Ind., May 10, 1890.

◆

Small Loss in Wintering.

Bees are doing well in this locality this spring. There was very little loss the past winter. Those wintered on the summer stands, packed in chaff, were the strongest, and have bred up the most rapidly. Of 10 colonies packed in chaff, we lost one that had lost their queen during the winter, and had to be united with another colony this spring. Of the remaining 9 colonies, one cast a swarm on May 8, 6 more need watching every nice day, while the other two are strong colonies.

Out of 22 wintered in the cellar, we lost two, one of which was a 3-frame neucleus of Carniolan bees, with an untested queen, which we bought last fall, intending to build them up into a good colony before winter; but although we fed them, and they worked well, the queen did not lay, and so, instead of a strong colony to put into winter quarters, we had only a nucleus that died before the time to take them out of the cellar. The other colony that died, was one of the best and heaviest ones we had. This leaves us 29 out of 32 colonies to begin this season with.

Fruit-trees are very full of bloom, and if the nights were not so cold (there being hard frosts about every other night for the past two weeks) bees would just roll in the honey. Still, we should not find fault with such small drawbacks, when we have so many things in our favor. Bee-keepers around us report their colonies strong, but no swarms yet, so we think that we can score the first swarm in this neighborhood, for this season.

J. W. Buchanan & Bro.

Eldora, Iowa, May 11, 1890.

◆

Backward Spring—White Clover

We are having a very backward spring here—wet and cold. Bees are in good condition, but they are short of stores. Fruit trees are beginning to bloom. and the bees are at work to-day. I have two small apiaries about one mile apart– 27 colonies in one, and 23 in the other; one colony is queenless, leaving 49 in good condition. White clover never looked better.

B. W. Peck.

Richmond Centre, O., May 12, 1890.

◆

First Bees—Extracting Honey.

Bees were first noticed in their wild state as we read of the Children of Israel using honey in their sacrifice before the Tabernacle of the Lord. Races were not known then as now—that was left for man to develop. Man, in the course of time, saw either by accident, or understand that honey oozing from the comb was good. Webster says that "extract" means "to take from;" wax, in itself, is not very palatable to some, hence a desire to get honey in its pure state. In this progressive age, where everything is developed as fast as Yankee, or any other nationality, can devise the thought of profit, or "How much can I make it pay?" is looked at from all sides. Bees will produce so much more honey if the extractor is used. What delights a bee keeper's heart more than to see the golden mass roll or run into his receptacles? Who does not love the essence of sweetness confined in the midst of this transparent liquid? As a medicine, nothing can equal it; as for food, is it not the nectar of the gods?

Valparaiso, Ind. Mrs. E. M. Casbon.

◆

Old Colonies of Bees.

Last fall I had 19 colonies, and my mother had 3; 21 came through the winter, one light colony belonging to me, having died, but the rest are in good condition. They were put in with lots of honey (fall honey, at that), but as they had a chance for a flight once in awhile, they came out all right. I have bought 5 colonies, so we now have 26. This is the best result that I have had in wintering bees for a number of years. Bees will winter on fall honey, if they have a chance to fly occasionally.

I had three kinds of chaff hives on trial the past winter—one a Root, one chaff Eclectic, and 13 Falconer's chaff hives. The colony in the Root hive seems to be a little the strongest, although some of the others are nearly equal to it; the balance of the colonies, excepting one, were in Langstroth hives, packed in chaff, and they wintered in very good condition.

The old colony of bees which I call the "Old Veteran," is still as good as ever. It will be 20 years old on June 20. I saw drones flying at this hive on May 2. I gave a description of the "Old Veteran" on page 316 of the American Bee Journal for 1889; and on page 745 of the same volume is an article giving the history of an old colony of bees owned by G. W. Rosenberger, of Rosendale, Va., which is called the "Queen of Rosendale." I received a letter from Mr. Rosenberger recently, in which he said : "I had 64 colonies last fall on the summer stands, and I have lost only one, the rest appearing to be in good condition. The 'Queen of Rosendale' is just as good as the best of them, and is 50 years old the coming summer." If any readers of the BEE JOURNAL know any other colony 50 years old, in the same hive that they were first put in, and have the same comb that was built by them the first season, I would like to hear from them in the BEE JOURNAL. J. S. BARB.

Oakfield, O., May 9, 1890.

Wintering Bees.

Having wintered honey-bees in this cold climate for 12 years, I have tried all kinds of schemes to bring them through without loss, or the least loss, and I find that a cellar is the best of all ; keep it dark, so that no light can be seen by the bees. Give upward ventilation to the hive, so that the vapor arising from their breath will not form water, and run down into the bees and combs which will wet and destroy them. Avoid noise overhead, as much as possible, or the bees will be cross in the spring. They consume less stores in the cellar, where it does not freeze, as they do not have to eat to make heat, as out-doors, and do not get so full before spring. I put all into the cellar last fall, and suffered less loss than usual.

I thought that a chamber was a good place to winter bees, being warm and dry; so I put in 2 colonies, corked them up with rags, and put wire-cloth over the entrance; they gnawed out, and the mice probably helped some, too. The bees stung the children in the beds, and behaved so badly that I concluded to move the worst ones. I got a neighbor to help one day, and we dug a hole in the snow near a hive outdoors—the snow was 2 feet deep ; I went ahead, backed down the stairs, the neighbor let go, and bee-hive and I were piled up, down in the stairway, with the bottom-board off, as well as the cap, and about a quart of bees out. I was stung a number of times ; however, we gathered them up as best we could, and buried them in the hole in the snow—hive and all ; they came out all right in the spring, and were as good as any of the others. Those left in the chamber, the moths destroyed in the spring. E. G. SLAYTON.

Chetek, Wis.

Correction—Dry Weather.

In my reply to Query 706, I am made to say, "I think so." It should have been, "I think *not*," as that is according to my experience.

Bees came through the winter in fair condition. The weather has not been very favorable for a fine honey-yield—too dry. We had a nice shower to-day—the first rain for a month. EUGENE SECOR.

Forest City, Iowa, May 9, 1890.

[It was a typographical error on the part of the printer, and escaped our notice. Mr. Secor had it written as he wanted it.—ED.]

An Extension, Reversible Hive.

Many bee-keepers think that they can make the best hive, so I have tried it, too. Not being satisfied with the movable frame for extracted honey, I wanted a hive that could be manipulated more easily, and stand the wear. So I make the hive with a front and back board just alike. Every thing is perfectly interchangeable. The ends of the frames are rabbeted so as to make a tight fit. All are held together by a bar on each side, passed through a loop, and four pins hold it tightly together. Now this hive works as well bottom side up, as right side up.

When the brood apartment is full enough of bees, and more room is needed, turn another hive bottom side up, on top, and when more room is wanted, split the hive open, and put in what frames are needed. If 5 frames are put in the bottom, and 5 in the top, then it makes a handsome cube. I use 10 frames to the hive; 30 frames are generally enough to prevent swarming. They seldom fill 40. A frame of sealed honey weighs from 7 to 8 pounds.

This hive can be made into a long extension hive so easily, if desired. The double-up hive can be opened as easily as the single hive. Another advantage is, no matter how large a swarm you may have, or how many swarms go together, you can make a hive to fit in a minute. Another advantage is, the bee-keeper does not have to watch his apiary so closely for fear he will lose some swarms. The apiarist can let extracting go until the end of the season. The hive is readily reduced down to the size of a dwindled colony.

Now whether other bee-keepers will find so many good things about it, I do not know. Using it will prove it. I have used it for 15 years, and would not give it for any hive I am acquainted with. A similar hive may have been invented a half dozen times, and thrown away as useless, for ought I know ; but for me, it is *par excellenee.* Its name is, "Extension, Reversible, Non-Swarming Hive." I would like to hear how many have tried a similar hive, and their objections to it. J. BLANCHARD.

What Ailed the Bees?

Mr. Julius J. Petty, on page 284, asks for the symptoms of disease in my bees. In almost every case, the symptoms all came just at the close—death—nothing more. In a few cases of the blacks, I found that the bees presented the wet, greasy appearance that Mr. Petty speaks of. They would crawl over the combs aimlessly, and the combs, tops of the frames, and sides of the hives were badly stained and wet. I think that in every case the honey that the bees had to eat, was nice and clean. There are no cider-mills in the county, and no fruit; the honey is gathered from clover, basswood and golden-rod. On some of the bottom-boards I found water and a quantity of dead bees. Over some of them I had burlap, and over others enameled cloth. Those having the burlap were free from moisture.

At no time during the winter was the mercury below freezing, and it was not damp, but I found some mold. In some of the hives there was over 20 pounds of nice honey. The Italians and hybrids seemed to just die, without any cause. In one case they were clinging to 3 frames of nice honey ; this was a new colony, and the combs were new and white. The bees were clean. and there was apparently no cause for their death. I am puzzled.

AKED D. ELLINGWOOD.

Milan, N. H., May 7, 1890.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
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☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

HONEY AND BEESWAX MARKET.

NEW YORK, May 6.—Comb Honey is well cleaned up, with the exception of California 2 lbs., which sell at 10@11c per lb. Extracted is dull at 7c for California, white clover and basswood; Southern, 70@75c per gallon. Beeswax, scarce at 27@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, May 2.—Receipts of honey are light, and demand fair for choice white clover at 13@14c. Other grades are dull and neglected. Extracted, 6½@7½c. Beeswax, bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 25.—Market is cleaned up on comb honey. We quote: White 1-lbs., 14c.; 2-lbs., 13c. Dark 1-lbs., 10@12c.; 2-lbs., 10@11c. Extracted is very dull sale at 5@7c. No Beeswax in the market.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, May 1.—Comb honey sells soon after arrival, if white and otherwise desirable, at 12, 13 and 14c; dark comb is slow at 8@10c. Weather is cool and seemingly favorable to its sale. Extracted, 6@8c, according to quality; some with no distinct flavor has sold at 5c. Beeswax—Yellow, about 27c; fancy, 28c; supply light. R. A. BURNETT, 161S. Water St.

MILWAUKEE, May 1.—Demand for honey is rather light. Supply is ample, of both comb and extracted. We quote: Best white 1-lbs., 13@14c; medium 1-lbs., 11@12c; common old 1-lbs., 9@10c. Extracted, white, in barrels and half-barrels, 7@8c; dark, in barrels and half-barrels, 6@6½c. Beeswax, 25@26c; supply light. A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May 2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, May 5.—One-pound sections, 14@16c; extracted, 7@9c. Demand good and supply likely to be exhausted before the new crop comes in. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, May 2.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
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◆

Keep an Apiary Account. in a regular business way. It will be lots of satisfaction at the close of the season to know exactly how the bee and honey account stands, without guesswork. To this end, you should obtain an "Apiary Register," a book gotten up for this very purpose, as well as to keep track of your Queens and Colonies. It devotes 2 pages to each Colony, and a mere glance will give you its complete history. The pages devoted to finance are ruled for Receipts and Disbursements, and being at the end of the book, are always convenient for reference, if properly kept. The book is strongly bound in full leather, and for an Apiary of 100 colonies of bees, only costs $1.00, postpaid. Get and use it, and you will not regret it.

◆

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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American Poultry Journal..	2 25....	1 50
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What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
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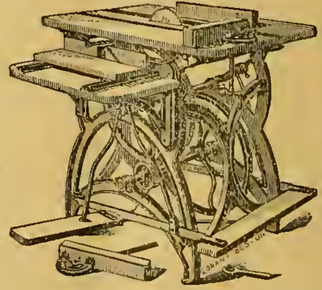

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 31, 1890. No. 22.

You ask me what is life?
'Tis like the slow unfolding of a rose,
Whose heart of gold glints thro' the folded leaves;
A hint of fuller life that is to be.
A picture where the sun and shadow blend,
(Ah! me, there's shadow oftener than sun);
A lost chord from some harmony divine,
A harp with golden strings, which, rightly touched,
Evoke such melodies as angels love;
A never ending struggle for some goal
That few may reach, but, ah, so many miss;
A segment of that circle infinite
We call Eternity; a boundless plain,
Whose center and circumference is Love.
F. A. JONES.

Be Careful to use none but nice clean sections for comb honey. Old and soiled sections should be used for kindling rather than for honey. New ones are so cheap now that to use any other than those in first-class condition is inexcusable.

Patriotism is the subject of a new book of over 300 pages, written by that eminent and popular preacher and author—Rev. H. W. Bolton, D.D., L.L.D., of Chicago. The "Introduction" is by Col. Jas. A. Sexton, an enthusiastic and well-known member of the Grand Army of the Republic, among whose constituency the work will no doubt find a ready demand. The book consists of a series of very interesting and instructive lectures given by the author before various patriotic organizations, which, besides being illustrated, should command a large number of readers, especially of those who fought in the late War, and of the sons and daughters of veterans, in fact, any one possessing a single spark of patriotic feeling. It is handsomely bound in cloth, and is published by Messrs. Transue & Grimm, of Chicago.

☞ Hon. James Heddon, Mayor of that enterprising city of Michigan—Dowagiac—was in the city last week on official business, and made the BEE JOURNAL a friendly visit.

Painting Bee-Hives.—The painting of hives is now under discussion again, and in last week's *Western Plowman* Mr. C. H. Dibbern makes these remarks about it:

> Shall we paint our bee-hives? This question has lately been raised again, and there are some reasons for leaving them unpainted. They are not so hot in summer, nor so cold in winter. The cost, too, is quite a consideration. But on the other hand they do not look so well, nor last so long. Boards are also more apt to curl up, and roofs become leaky. Some 15 years ago we used unpainted hives, but after a few years of experience we commenced painting them again. The same reasons for painting hives apply to houses. I believe there is a colony in Iowa who do not believe in painting their houses, believing that it is cheaper to buy new boards occasionally than spend money for paint. This may be a fair question for discussion, but what a looking spectacle does an unpainted apiary or town present! As nearly all civilized people paint their houses, we must conclude that the weight of evidence is vastly on that side.

What if the paint does cost a few cents, who, having any eye for beauty or the appropriateness of things, would want to see unpainted hives in an apiary? To our mind the idea is simply preposterous! Look at the lovely floral offerings now to be seen on the trees which are soon to yield their fruits for the pleasure and sustenance of man.

See the lovely carpet of verdure spotted with flowers of gold, which Nature has spread before our eyes in meadow and on hillsides!

Contemplate the variegated loveliness of autumn's landscape, spread before our wondering eyes by the Giver of all Good.

Just think of the grandeur and beauty with which Nature greets our astonished vision, and then try to imagine an Apiary where the hives are unpainted, and the ugly and dilapidated boards are going to ruin and destruction!

It is a burlesque—a disgraceful "Cheap-John" idea, which should find no favor anywhere in a world which God has made beautiful for man's comfort, satisfaction and consolation!

We should paint our houses, our barns, our fences, and —— our hives, for the same reason that God has painted the rainbow, and studded the firmament with stars!

The Missouri State Bee-Keepers' Association has affiliated with the "International." That is right. The sooner the latter becomes a representative body, the better. It may then become in *fact* what it is now in name only—International. Let the good work go on until every State, District and Local Society is represented in it, and then its power and influence for the good of the pursuit will be felt in every part of our common country—America.

☞ Jamestown, N. Y., should have been the address of the W. T. Falconer Manufacturing Company, on page 348. The printer had it in New Jersey instead of New York.

Sign Boards near the road, for farmers who have honey or any other article to dispose of, are very useful, and withal they will pay. A correspondent in the Orange Judd *Farmer* offers these suggestions and remarks:

> Every farmer should have a bulletin-board, or small black-board 2x4 feet, and when there is anything to spare, write it on the board and stand it up by the roadside. It may be a milch cow, a spare horse, a fat hog, a calf or colt, a few seed potatoes, plants or seeds, or any other commodity. It is your surplus; somebody wants it, and would buy it if he knew where it was. A few years ago I wanted to buy a cow. I rode three days and stopped at many houses to make inquiry. It occurred to me then that a farmer's Bulletin-Board would be a good thing for buyers and sellers.

We fully agree with this suggestion, and as many honey-producers are already practicing it, why do not bee-keepers generally use it, and thus reap the full benefit?

A B C of Bee-Culture, by A. I. Root, has again been revised and enlarged, and the new edition is now on our shelves. It contains 420 pages, and is profusely illustrated. It is the cheapest, and one of the best—if not the very best of all the books on apiculture in existence. We congratulate friend Root upon the perfection and excellence of his book. The author says: "The subjects in the body of the book, that have received special revision, are Comb Honey; Feeding (the latter being entirely re-written); Extracted Honey; Hive-making, with a description of how to make the new Dovetailed hive; Queen-rearing, with a brief summary of Doolittle's method of procuring and completing cells in full colonies with a laying queen; Swarming; Veils, and Wintering. The last subject was entirely re-written, so that it is the very latest in regard to the in-door and out-door methods. The whole subject is well illustrated."

To Equalize the population in the hives, it is now high time, so that all the colonies in the apiary may be ready to gather the June harvest. Mr. C. H. Dibbern, in the *Western Plowman*, remarks on this subject thus:

> May is pre-eminently a month of preparation and anticipation for the bee-keeper. Every care and attention should be given every colony in the apiary to place each in the most favorable condition to breed up rapidly. It is the bees produced this month that will gather in the clover harvest in June. It will pay well to equalize colonies now, and place all on an equal footing. Where no attention is given on this point, a few will be booming, and will swarm by the time the first clover blossoms appear, while many others will be so weak that they have barely managed to hold their own. It is more profitable to have all do well than to have a few that produce extra yields, and many that yield next to nothing. During fruit bloom is a good time to do this equalizing, as there is then little danger of robbing.

In some places it is too late to do this—in others, further North, it will be in time.

GLEAMS OF NEWS.

Honey-Dew and Plant-Lice.—On page 264, Mr. A. C. Tyrrel, of Madison, Nebr., in an article referring to the scanty knowledge about the winter losses of bees, gives some of his observations regarding honey-dew and its origin ; and on page 314, Mr. M. A. Kelly, of Slippery Rock, Pa., also advances his "secretion theory" of honey-dew, and suggests that those who hold to the "excrement theory" concerning its origin, send him samples of leaves "having the honey-dew and the aphis" on them, for examination. In reply to this request, Mr. Tyrrel has sent us specimen leaves with aphides and "honey-dew," and comments as follows about it :

I send you a twig covered with lice and so-called honey-dew, for your opinion concerning the same. You will notice by examining the leaves that they appear to be covered with excrement, or a substance resembling honey thinly spread out, fairly glistening in the sunlight. You will also notice, if the lice do not drop from the twig in transit, that there are hundreds of them, and a few in an advanced stage having wings.

It is true, I do not live in a "wooded country," but we have hundreds of box-elder trees surrounding our residence, and there are many large trees of the same variety growing on the creek and river banks. As these trees produce sugar nearly equal to maple-trees, I think it not unreasonable to infer that from the incisions in the leaves and tender twigs by the pests, oozes the sweet matter improperly called honey-dew, and that in reality it is caused by lice, and cannot be attributed to "conditions of the atmosphere."

If this were not the case, why is it that those trees thus infected only are covered with the sweet, sticky substance, which seems to me *prima facie* evidence of the truth of my allegations, viz : that honey-dew does not drop from the heavens like the purported fall of manna, neither is it produced by atmospheric conditions, but that it is either excrement from or dripping of the juice from leaves punctured by lice or slugs.

After all that can be said *pro* and *con* on this subject, I think it makes but little difference, so far as the health of our bees is concerned, where the stuff comes from, and I do not care to say anything more on this subject hereafter.

A. C. TYRREL.

We have no opinion to offer as to the origin of the so-called "honey-dew." We prefer to leave that matter to scientific minds to determine. We have sent the twig to Mr. Kelly, after making an examination of it. We desire to hear from Prof. A. J. Cook, and shall value his "opinion" very highly.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

A "Directory of Writers" is the name of a comprehensive book soon to be offered to the public.

A means of easy inter-communication between writers, editors, and publishers has long been needed. To supply this need, the editor of *The Writer*, the Boston magazine for literary workers, has undertaken to compile a "Directory of American Writers, Editors, and Publishers," which will be published at the earliest possible day. No charge whatever will be made for the insertion of names and addresses in this directory, the usefulness of which, particularly to editors and publishers who wish to communicate with writers, will be evident at a glance.

The desire of the editor is to make the directory as nearly complete as possible, but the army of minor writers is so great that it will be necessary to limit the number of addresses in some reasonable way. It has been thought best, therefore, to include in the first edition only the names of writers who have had a contribution printed in some one of the leading magazines or weekly periodicals during the last five years, who have or had a book published within the last ten years. Writers who are included in either of these classes are requested to send *at once* to the editor of *The Writer*, P. O. Box 1905, Boston, Mass., the following items of information :

1. Name of writer.
2. Present residence.
3. Permanent business address.
4. Literary specialty.
5. Titles of principal articles or books printed, and dates of publication.

This information should be sent promptly, for the directory has been for some time in preparation, and its publication will not be long delayed.

The editor of the directory will be obliged, if, in addition, writers will send on a separate sheet, *not for publication in the directory*, autobiographical particulars, including date of birth, place of birth, parents' names, date of marriage, name of husband or wife, successive places of residence, title and date of first work printed, list of later works, and other such matter as would be suitable for publication in a "Biographical Dictionary of American Authors," now in course of preparation.

By the prompt co-operation of those who are interested in the matter, the early publication of the directory may be secured. Editors of periodicals, to whom the directory will be especially useful, are requested to aid in the compilation by sending to the editor the addresses of contributors who do good work, but who may not have a national reputation. The more of such addresses the directory contains, the greater its usefulness to editors will be.

The authors of bee-books and writers for bee-periodicals should send their names, addresses, etc., so that the bee-interests may be represented, as becometh their importance.

The Eighth Edition of our book, entitled "Bees and Honey, or the Management of the Apiary for Pleasure and Profit," is now published, and ready for delivery. This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, $1.00, postpaid.

Here are some of the earliest comments on this new edition :

The 8th edition (revised) of "Bees and Honey" is on my desk, and a gem it is ; printed on paper of the finest finish, and with the clearest of type, fully up to the times, profusely and beautifully illustrated —making it, as an album alone, worth the dollar charged for the book. In answering the many inquiries as to the best bee-books, I shall be proud to place at the head, "Bees and Honey, or the Management of an Apiary for Pleasure and Profit," by Thomas G. Newman, editor of the AMERICAN BEE JOURNAL.—Geo. E. Hilton, Fremont, Mich.

When turning the leaves of my copy of the new edition of your book, entitled "Bees and Honey," I was much pleased to find in it the portraits of so many of the leading apiculturists, and unexpectedly found my own among them. I am sure I can never repay you for the honor you have done me.—Eugene Secor, Forest City, Iowa.

The new edition of "Bees and Honey" is received. It is an excellent work, with nothing lacking in perfection and beauty, and will speak for itself to the mind of every reader. It is well worthy of a large circulation. I shall use it as my daily hand-book, and recommend it to bee-keepers with whom I come in contact. It is cheering to notice the countenances of the many masters of the art, whose able articles aid apiculturists through the columns of the AMERICAN BEE JOURNAL.—Stephen Roese, Maiden Rock, Wis.

Complimentary Words.—Here are some of the newest expressions of satisfaction from our patrons :

My advertisement of Japanese buckwheat seed for sale, which I put in the AMERICAN BEE JOURNAL, brought more orders than I could fill. So I bought my neighbor's crop, which is now almost gone. I hope that none will send me the money until they have written, for I do not want to send back hundreds of dollars.—E. C. Eaglesfield, Berlin, Wis.

I have received the seed. Well, to tell the truth, if a man could get supplies that quick, when he wanted them, it would save lots of money, and hard words, too.—C. K. READING, Davenport, Iowa.

The Singer Sewing Machine you sent me, does splendid work. I am well pleased with it.—G. RUFF, Burlington, Iowa.

My bill of goods I ordered from you reached me all right and in good condition —everything as I ordered.—ROBT. HARVEY, Aurora, Ills.

QUERIES AND REPLIES.

Space Bees will Least Likely Fill with Wax.

Written for the American Bee Journal

QUERY 709.—There is undoubtedly a certain space which the bees are least inclined to fill with wax or propolis. What, according to your own experience, is the exact measurement of the correct bee-space?—New York.

Three-sixteenths of an inch.—EUGENE SECOR.

About ¼ of an inch.—J. P. H. BROWN.

Five-sixteenths of an inch.—G. M. DOOLITTLE.

Scarce ⅜ of an inch; about five-sixteenths of an inch.—A. J. COOK.

A little less than ¼ of an inch.—DADANT & SON.

Five-sixteenths of an inch, as nearly as you can get it.—H. D. CUTTING.

Three-eighths of an inch; possibly a shade scant.—MRS. L. HARRISON.

A strong quarter of an inch, or five-sixteenths of an inch, is just right.—C. H. DIBBERN.

I may not be authority, but I use ⅜ of an inch.—J. M. HAMBAUGH.

Three-eighths of an inch is generally supposed to be the correct bee-space.—WILL M. BARNUM.

I do not know. It is less than ⅜ of an inch, and more than ¼. Perhaps five-sixteenths of an inch is about right.—C. C. MILLER.

Five-sixteenths of an inch, but with a ⅜-inch space there is but little, if any, more wax or propolis deposited.—A. B. MASON.

More depends upon having absolutely smooth surfaces, than on the distance apart. I have not determined, to my own satisfaction, the exact space. One-fourth of an inch is not far wrong.—M. MAHIN.

If I could be always sure of having what I wanted, I would have bee-spaces ¼ of an inch; but as wood so often springs, allowance must be made so that the bee-spaces may not be too small.—R. L. TAYLOR.

The proper space is just between too wide and too close; and I think that a shade less than five-sixteenths of an inch is as near as can be practicably reached. Wood will shrink and swell a little, and top-bars of frames will get a little "off," no matter how accurately made, and the best that I can do is to aim at a five-sixteenths of an inch space.—G. W. DEMAREE.

The same that Father Langstroth gave us over 30 years ago—scant ⅜ of an inch, or, more exact, five-sixteenths of an inch above the frame; ⅜ of an inch will do very well at the ends of the frames, and ½ inch is all right at the bottom, below the frames.—JAMES HEDDON.

The exact measurement of the correct bee-space is ¼ of an inch, or a space that a bee can move in freely; but five-sixteenths of an inch is the space that should be provided between the brood-frames and the ends of the hive, to facilitate the removal of the frames without killing bees. Queen-excluders that come within ¼ of an inch of the top-bars of the brood-frames, greatly lessen the building of burr-combs.—G. L. TINKER.

It is impossible to *fix* frames in practice so that they will space exactly throughout the whole hive. I use the 10-frame Langstroth hive, 14¼ inches wide, spacing the frames so that a ⅜-inch dummy will fit closely in one side of the hive. I use the dummy for convenience in working, and consider the spacing as above stated to be as nearly right as is possible to get it.—J. E. POND.

The exact measurement of the space required for bees, for easy passage, is five-sixteenths of an inch, but they will not fill a space with comb which is not more than ⅜ of an inch in size.—THE EDITOR.

CORRESPONDENCE.

SPACING COMBS.

The Proper Distance—Number of Cells to the Inch.

Written for the American Bee Journal

BY DR. C. C. MILLER.

I have been much interested in reading the article on page 313. Some things in it make me think of Mr. Faylor as a careful and independent experimenter, finding accepted theories wrong, while other things in his article raise the question whether his own theories are not too hastily formed. That "the black bee is rapidly giving way to the 4 and 5 banded Italian," I think is hardly correct. Most bee-keepers have only 3-banded Italians, and I doubt whether many of them care to increase the number of bands.

With regard to the spacing of combs, I am glad that he has called in question the practice of many, whether he be right or wrong. The fact is, it seems to me that too many have settled upon 1⅜ inches, or some other distance, without any reason for their conclusion, and it is high time to ask *why* is 1¼, 1½ inches, or any other distance, the proper one for spacing? Mr. Faylor gives us a weighty argument when he gives us the testimony of the bees themselves.

Now, if, as Mr. Faylor says, all the main combs in a box-hive are placed not less than 1½ inches apart, there should be some very good reason for spacing closer. I am sorry to say that I have no ready means to verify his observations. I think that it would be a favor to the fraternity, if a number would report in the AMERICAN BEE JOURNAL, as to the distance from center to center of the central combs in a box-hive. Even if we should find 1½ inches the rule in box-hives, the advocates of closer spacing might say that bees left to themselves will use a spacing that will allow the building of drone-comb; and we don't want drone-comb.

The argument that wide spacing gives more room for storing honey above the brood-nest for winter, has force.

That "bees are more liable to swarm where the combs are hung too near each other," may be true, but if less than 1½ inches is considered "too near," it runs violently afoul of Mr. Pond's plan of preventing swarming by shaving combs down to ⅞ of an inch, and leaving only a bee-space between, thus spacing from center to center, 1¼ inches, or less. It would require a good deal of testimony, I think, to make the mass of bee-keepers think that spacing less than 1½ inches induces swarming.

Do the observations of others agree with those of Mr. Faylor, that more brace-combs are found with 1¼ or 1⅜ spacing than with 1½?

NUMBER OF CELLS TO THE INCH.

When I read that Mr. Faylor intends to throw away his old foundation machine, and use one that will make 4½ cells to the inch, I cannot help wondering if he is fully posted as to experiments already made in that line. Years ago, Mr. A. I. Root made foundation 4½ cells to the inch, and received some left-handed "blessings" for it. I had some of it. The bees did not seem to know whether it was drone or worker comb, and did not appear to relish it for either.

Mr. Faylor is a very brave man to intimate that bees, of their own accord, build worker-cells larger than 5 to the inch. Are all the books and observers of the last hundred years in error on this point? If Mr. Faylor does not want to lose reputation as a careful observer, he will do well to make some critical measurements, and send samples to the editor. I think that I can find combs by the hundred, from 5 to 20 years old, that contain cells measuring 5 to the inch, and yet they produce just as large workers as when the combs were new. I think that others have given testimony to the same effect.

P. S.—I ought to say that bees do not build comb exactly 5 cells to the inch, but about 4 4-5; and that comb foundation is also made the same size. Until I measured, I supposed that exactly 5 cells to the inch was correct.

Marengo, Ills.

ILLINOIS.

Report of the Capital Bee-Keepers' Convention.

Written for the American Bee Journal

BY C. E. YOCOM.

The Capital Bee-Keepers' Association met at Springfield, Ills., on May 7, 1890. The convention was called to order by President P. J. England.

From the report of the members, we gather that of the 599 colonies left on the summer stands, 27 (4½ per cent.) were lost; of the 152 colonies stored in cellars, 15 (9 4-5 per cent.) were lost—a difference of 5 3-10 per cent. in favor of out-door wintering, the past winter. Of the 21,900 pounds of comb honey produced in 1889, only 50 pounds remain unsold, and of the 8,170 pounds of extracted honey, 570 pounds remain unsold.

After disposing with the Order of Business, Mr. Jas. A. Stone, of Bradfordton, Ills., read an essay on

Comb Honey—Production, Care.

Comb honey, in all its purity, and without a possibility of adulteration, is one of the healthiest, and, we might say, the healthiest sweet that goes upon the market.

While the sweets of commerce may be—some of them—pure and unadulterated, yet it is possible to make them otherwise, and it is a shame to say that some one is ever ready with his process by which to make a profit by imposing on his fellows. But thanks to the Giver of all good things, that He has made the little honey-bee *so* wise that it can make a comb that cannot be imitated, in which to deposit the honey it gathers.

We will say nothing of the adulteration of extracted honey—except that the price of the same is so low that we do not believe it is carried on extensively, as there can be but little, if any profit. But while there is as pure a sweet as comb honey is acknowledged to be, let us lend our time for a few moments to the consideration of its "production and care."

There are many points to be considered, but we shall only touch on one or two of them, that we think are most vital.

Kind of Bees.—We ought to have the kind that will gather the most honey, unless they are more dangerous as regards "life, liberty and the pursuit of happiness;" and, in the Italian, we claim to have a bee superior in disposition, as well as other qualities, to the native bee.

Since the importation of Italian bees to the United States in 1860, they have increased rapidly, and have become very favorably known. They are superior to our native bees, in their large size and greater beauty; they are more prolific, longer lived, more industrious, less sensitive to cold, and they swarm earlier and more frequently, and continue later than common bees. Rev. L. L. Langstroth said that his Italian colonies gathered more than twice as much honey as his colonies of common bees; and Mr. Quinby said that in all his experience, he had not received an unfavorable report of them.

Kind of Hive and Sections.—Of late years we all know that there is no market for honey in the old-fashioned box. And why? Because it is superseded by the one-pound section. In all the commercial world, the object sought is to get things into the best possible shape for handling; and this shape for comb honey is conceded to be the one-pound section. Then, it follows, that the hive used should be the one in which we can handle the sections with the greatest ease and convenience, regarding stickiness, irritating bees, etc.

We want a hive having a section-case in which the sections are so placed as to be easily taken out when full; or, if not desired to be taken out, the case raised and an empty one placed under it; and so on, tiering up indefinitely, and thus leave the honey in the care of the bees (as they can care for it better than we can) till we want it for market, or, if the time comes for storing away for winter, we can take it from the hive in the case without loosening or breakage.

Pasturage for Bees.—The bee-keepers of this part of the country have learned that in the years when white clover is a failure, the surplus honey crop is also more or less a failure, which proves that it is our best honey-producing plant; also, the honey it yields demands the highest market price.

Other plants, such as Spanish-needle and heart's-ease, sometimes yield a good supply of fall honey, but to encourage their growth is to grow weeds. Buckwheat sometimes furnishes well, but I have seen it in full bloom when it did not produce at all. Catnip and motherwort are excellent honey-producers, but the trouble with them is that they never become plentiful enough, for they are biennial, and easily killed out where land is cultivated, and are almost useless for other purposes, except medicinal.

In some localities golden-rod is valuable as a honey-plant, but I have failed ever to see a single bee gathering from it. Alsike clover (where it has become common) is conceded by bee-keepers generally, to be ahead of all other plants—for this and many other States—as a honey-plant. The attendants upon the Northwestern Bee-Keepers' Convention spoke in high praise of this clover as a pasture for stock as well, and for mowing for hay; and many who had tested it preferred it to red clover, to mix with timothy—its good points being that it ripened with timothy and cured as quickly. So in summing up honey-plants, I believe our *best* plant is the Alsike clover.

With all the above-named plants favorable, the bees will produce the coveted sweet; but I do not believe that it is wise to be over-anxious to get the first drop of honey that it is possible for the bees to secure in the spring, and thereby starve the brood. In other words, I do not believe in "killing the goose that lays the golden egg;" but I do believe in first providing for the life and health of the "goose," that she may "lay" many "golden eggs."

But one says if they do not produce stores enough to carry them through, feed them on something less valuable than honey. The question then arises, Is that possible, in the light of reason? I do not believe that there is any other food for bees that is as good as that which they gather where Nature has supplied it, notwithstanding the authority on the other side of the question.

Suppose one gets his bees through the winter on a food that is much cheaper than another uses, and eventually (though perhaps not for a year or two) some disease—diarrhea, foul brood or what not—breaks out among them, and the profit ceases, bees and all. "But," you say, "these diseases will sometimes come anyway." Certainly; but we notice that those who are crying most in favor of feeding are those who have the most disease in their apiaries to cry about. We noticed in the Northwestern Convention last fall, that the very man who had the most to say about a bee-feed to prevent diarrhea, was the same man who said most about his bees being troubled with it. I quote from the American Cyclopædia, when I say, "Feeding should never be attempted as a matter of profit."

Care of Comb Honey.—In storing, it should have a warm, dry place; and one said in the convention last fall, that it ought not to be tiered within 6 inches of the wall of the room.

In marketing, I believe that our first, last and all-the-time rule should be—*Tidiness.* We should not let our honey go into the market with impressions of our thumbs on the sections. Nothing would be more vexing, than for one to offer his honey to an old customer, and have him say, "Why, here is some honey I got from Mr. A., at 2 cents less than you offer yours, and I can't sell it." You look at it—you do not wonder that it will not sell, for it has no inviting appearance. If men do not know it, the sooner they learn it the better, that almost everything is sold to the majority of people on its looks; and tidiness is first considered when the appetite is being tempted.

In the first place each section should have the wax scraped off around the edges, where the bees have come at it, and then it should be placed in a nice, clean shipping-crate. I prefer the single tier, as there is no drip from the upper to the lower sections. Have glass in one side, and do not let it go to market in such a shape that you cannot see through it. for it is there to look through.

Some of the grocers send back the shipping-crates in a very bad condition, and I have noticed that they are the ones who sell the least honey (*i. e.*, where they show it in the cases), and the cases ought to be nice enough to show the honey in.

In some instances when I have furnished private families, and afterwards called for the crates, they would go to the cellar for them. In such cases, they seldom give the second order. The probabilities are that the honey lasted longer than it was good. People must learn that warmth and dryness are requisite to the good of honey—not a cellar. Some of the productions of man keep best in the cellar, but that is not the proper place to keep comb honey.
JAS. A. STONE.

Mr. Robbins—Are your bees all Italians?

Mr. Stone—No; some of them are not.

Mr. Robbins—What is your sign of purity?

Mr. Stone—Three yellow bands.

Mr. Robbins—That is not a sure sign. I have had bees that had three yellow bands, and were Italians so far as looks were concerned, but their disposition proved them to be hybrids. The finest looking bees are not always the best. I once got some bees from a bee-keeper that were black; I wrote to him about it, and he replied that the color had nothing to do with it. They proved to be good bees.

D. D. Cooper judges by temper, and clinging to the combs, rather than by yellow bands. He also had some bees from the same bee-keeper mentioned by Mr. Robbins, that were black, but good bees.

Mr. Draper—I had queens in 1870 that were better than any I ever had, or could find, since. Has anybody ever seen black or German bees that stuck to the combs while being manipulated?

Mr. Stone bad not, neither had he ever seen Italians that were well marked, that did *not* stick to the combs.

Mr. Kennedy judges the purity of bees by their actions.

Mr. Becker does not bother about bands. He feeds his bees sugar for winter stores, and is successful, while his neighbors, who feed honey, fail in wintering. Last winter was a bad winter for bees to consume their stores.

The convention then adjourned till 1:15 p.m.

AFTERNOON SESSION.

The convention was called to order at 1:15 p.m., with President England in the chair.

KINDS OF HIVES USED.

This subject was brought up, and the Simplicity, Improved Langstroth Simplicity, and the old style Heddon were mentioned.

Mr. Cooper uses the latter, and likes them best, although the Improved Langstroth Simplicity, as now made, are better than they used to be.

Mr. Stone—Wherein is your hive better than the Improved Langstroth Simplicity?

Mr. Cooper—The honey-boards prevent brace-combs, and sections can be taken out easier than from the Improved Langstroth Simplicity.

Mr. Stone uses the Improved Langstroth Simplicity, and has no trouble in getting the sections out of the super. The Secretary also uses the same, and experiences no difficulty in removing the sections. At one time he was so well pleased with the appearance of the old style Heddon hive, that he made one for trial, but as it was late in the season, and the weather cool, he had trouble in getting the sections out without spoiling them. This hive is used for only comb honey, while the Improved Langstroth Simplicity is a general-purpose hive.

Mr. Geo. F. Robbins, of Mechanicsbrug, Ills., then read an essay on

Creating a Home Market.

One day last summer I chanced to stand for a few moments on the pavement near the Farmers' National Bank, when a group of four newsboys and boot-blacks came round the corner, and proceeded to besiege me for a job. A silent shake of the head repelled all attacks, but the assault was in turn renewed upon several other pedestrians with like success. At length, one of them said: "Come, let's go over to the other side of the square," and for the other side they started. I will follow them pretty soon.

When I began to cogitate as to what I should say upon this subject, I thought to urge, as usual, for it is one of my hobbies: Work up your home market. Sell to your neighbors. Sell all you can at and near home. Then I remembered what one of Springfield's leading grocers said to me in 1886, "that honey cut into the syrup trade like everything;" and I thought, when I urge honey upon a neighbor, do I not work against the business of someone else? Do I not press the honey-trade at the expense of some other commodity that may have a prior claim? As I crowd myself and mine in, do I not crowd others and theirs out? And then I thought about these boot-blacks.

Now let us not say right here that humanitarianism has no place in the business world—we do not think or feel that way. Though the selfish in their nature may seek to crowd it out, or the cynical to disown it, yet business men are at heart interested in the welfare of their fellow men. Here were four shiners, each one working for himself, in a sense, in opposition to the rest, yet each one saying to his fellows, "Come, go with me." I say opposition, in a sense, for he is only seeking his own, not another's. Let *me*, not *him*, shine your boots;" but if his competitor gets the job, it is fairly won—it is his.

It fitly illustrates the state of things in this business world; a hundred boot-blacks, a hundred merchants, a hundred farmers, may be all in competition, all grasping for the same prize to the exclusion of the others, yet each saying to all, "Come, go with me;" and what is true of persons is true of occupations and commodities. A thousand articles on the merchant's shelves, all striving together for the patronage of the consumer; and the advent of a new boot-black, or a new article, or industry upon the arena, has only the ultimate effect to produce a more persistent striving. The one elbowed out here, must only push in yonder. The supply will seek a demand.

A trade or business will strive, so to speak, to find its level. It is this striving that constitues the very life of business. Why do the waters in their streams flow on with such restless energy? What is the secret of their wonderful power—a power so great that it requires a breakwater of almost adamantine strength to arrest their progress for a moment? Why is it that though when damned in their channel they may present a smooth, quiet surface, the moment they reach the edge of the precipice they charge over and on with a force and fury augmented in proportion to the resistance which they have met? Why, the waters are simply seeking their level. So it is in the business world. Trades and industries will find their level, and when turned from one channel, they will seek another. Honey is itself no exception to the rule. It is comparatively a new article—the world of commerce is working its way; but though honey may crowd out some other commodity to-day, some other will strive with it to-morrow.

A young man was once employed to sell a certain article to the trade. A few days after he started, he wrote to his firm, "There are three men ahead of me selling a like article. What shall I do?" The answer came quick and terse: "Go on. There are fifty more behind you." So our product—honey—must not only strive with all that has preceded it, but all that is to follow.

Now, conceding the all-important item is to create a demand for honey, how shall we do it? How *can* we do it best? Why, go to your neighbors right at the outset. "Bone" the first and nearest. Ask him if he does not want some honey. That is a simple way, but I deem it important and essential. To give a neighbor a little to tickle his palate, may be a good plan, but I have not practiced it much. I simply tickle this man or that woman personally, and talk them into it; and if at first I "don't succeed," I "try, try again."

Don't force a man—that is not necsary; but if there is a chance to interest him, do it. As my grandmother used to say, "Mind your p's and q's." Don't try to take him by storm—just outflank him if you can.

I believe I will break into the thread of my essay here, to tell a little story. I once sold a few pounds to a doctor, but afterwards, when I endeavored a time or two to sell him a little bit, he declined—said he was too poor. Nothing daunted, one evening last fall I approached him again on the subject. Again he declined.

"Why, don't you like it?" "O, a little—not very much."

"Where do you keep your honey when you have any? or do you know how the honey you used to have, was taken care of?" Soon I had him drawn into a litttle conversation on the nature and care of honey. Said I, finally, "You had better *try* a little of my honey."

"Well, bring me up about a dollar's worth."

Not very long after I took him the honey, he met me with, "George, got any more honey?"

"Yes, sir; 2 000 pounds of it, or thereabout."

"Bring us up another dollar's worth, will you?"

Of course I would, and of course I did.

About a week later, when I met him again, "George," said he, "what's the matter with your honey? Somehow or other, it won't keep at all. Don't know what we're going to do about it."

I said that I did not know what was the matter,unless it was that the honey was just too good to keep, and that I supposed we would just have to replace it with another dollar's worth. We did so.

Finally, one Sunday in February, the father met me in the aisle of the church, and with a smile about the dimensions of a two-pound honey-section, said: "Mr. Robbins,the doctor's folks are out of honey. The doctor has been wanting to order more, but he said he had not got to see you." "All right," I said, "I will bring some up to-morrow evening."

There was four dollars worth to a nice customer whom I found it hard to gain. It was no small accomplishment. You see I deliver my honey. That is the right way. Don't ask a man to buy some honey, and tell him to come and get it. Don't be afraid to peddle a little. I started out to work up a trade that very way. At first my sales in half a day would hardly pay wages; but I soon learned where I would sell honey. Now they look for me to come around, and sometimes send me an order.

I do not advise hauling comb honey around much, unless you have a pretty good idea where you can dispose of it. In that case, weigh it and wrap it in about dollar packages. Be a one-priced man. Treat all alike. Better lose a sale now and then, than suffer men to "Jew" you down.

One of my best customers refused last fall to pay me my price, and I left him. I afterwards decided to do what perhaps I should have done at first—tell him if he would take $3.00 worth, I would let him have it at his price. He bought two installments on these terms. I then adhered to the rule with others. Not many, however, will stick at the price, or take so much at a time.

I dispose of considerable honey in trade for articles which I desire. Workingmen men especially will often exchange their stock in trade—labor—for honey, when they would not venture the cash.

I have put my honey on sale in local stores, but I cannot do it with the best success. There are three villages from 2 to 5 miles from home. The most distant market is my best one, in this respect; the nearest one is the poorest. The latter I can generally supply directly with better satisfaction to all parties. In disposing of honey in this way, my practice has been to select sections as nearly even and equal weight as possible, put them into a glassed shipping-case, fix the price myself, and pay the merchant a commission. The sections of irregular weight I use to supply private customers. I have never paid more than 10 per cent. commission. One great rub seems to be to find just the right kind of an agent.

Finally, let us remember that honey is largely a luxury, and must be produced for luxury seekers. Produce a *good*, however, as well as a *nice* article of honey. It must be made to please both eye and palate. I grow less and less disposed to sell an inferior article, without telling my customers. When my clerk came to live with me recently I put some honey on the table that I had left on the hives until fall. It had acquired the dark color and pungent flavor that such honey always does. He thought he liked it pretty well at first, although I could not eat it. But pretty soon he began to tire of it. When I put a section of good honey on the dish, and he tasted thereof, he said, "Now this tastes fit to eat. This is good." I had not told him there was any difference in quality, either.

Whatever I do, I always grade my honey, and sell the different grades at what they are worth. I have sometimes sold a very poor article at a very low price—and the purchaser seemed to like it. You know some folks have not the keen perception in taste that others have—just as it is with all the other senses. But folks will grow tired of poor honey sooner than they will tire of a good article. Indeed, judging from my own experience, I am confident that the distaste of so many to honey, is very largely (it may be principally) due to eating a poor article.

The care of honey does not belong to this subject, but the quality of honey does, for very obvious reasons, and, hence, I take it upon myself to urge upon this convention, if you would build up your home market, or any other market, study your best to produce first-class honey.

GEO. F. ROBBINS.

Mr. Cooper—Do you give any honey away to induce the recipient to buy?

Mr. Robbins—No. If you do that, he will expect more.

Mr. Stone once asked a man if he wanted some honey. He replied, "No, I don't care much for honey." The next time he was in town, he gave the man some honey, and sold to him afterwards.

Mr. Draper placed a hive with "Pure Honey" in large letters on it, in his wagon, and sold lots of honey. He soon became well known. "They even call me 'Honey,'" he said. "People salute me with, 'Hello, Honey,' or 'How-do-you-do, Honey?'"

Mr. Becker had some broken comb honey that he offered for sale. Once he was met with: "It is too late. It will not keep. I bought some extracted honey of you, and it did not keep." He sold to another man, who started into the cellar with his honey. He was stopped, and told not to put it in the cellar.

Mr. Van Doren—I never peddled any honey until last year. I got started by some neighbors who asked me if I had any honey. I answered, "Yes, sir." They then said: "Bring me two or three (sometimes five or six) dollars worth."

Mr. Goff has no trouble in selling honey. People call for it, and he could sell more than he can produce.

SHADE-BOARDS FOR HIVES.

The Question-Box was opened, and "Does it pay to use shade-boards?" was asked.

Mr. Draper said his bees did not need them.

Mr. Becker—I do not want any shade for my bees any time. Give the bees the sun the year round. I have never seen a frame melted down, that a good colony of bees had access to. Give them plenty of room and ventilation.

Mr. Stone has his bees under a shed. The strongest colony he had last season was under a tree. He could not say which is best—sun or shade.

Mr. Robbins—Shade is a good thing in summer. I like artificial shade.

EXTRACED HONEY—SWARMING.

Mr. England—Use large hives for extracting. To prevent swarming, do not allow the combs to get more than three-fourths full.

Wm. Yocom—If bees have plenty of room in the right place, I do not believe that they will ever swarm. In Kentucky, my father once cut 12 hollow logs, 6 feet long and 4 feet wide, and placed a smaller "gum" containing bees on top of each, so arranging it that the bees were obliged to pass down through the lower "gum." Not one of them ever swarmed until the whole "gum" was filled. My father-in-law once built a house 6 feet square, with shelves arranged on three sides, and a door in the other. Bees were introduced to this huge hive, which stood for several years. They never filled the hive, nor *never swarmed.*

HONEY FROM ALSIKE CLOVER.

"Does Alsike clover furnish more than one yield of honey in a season?"

Mr. England—My Alsike never blooms but once, to amount to anything, in a season. It furnishes no honey after being cut. It seeds itself.

Mr. Van Doren—While in Cleveland, Ohio, I learned that Alsike furnished nearly all the honey in that locality, two years ago. It makes good hay, and more of it than red clover.

Mr. Cooper—It is not a good bloomer after it has been cut. I would sow no other kind, even if I had no bees.

HOW TO WIRE FRAMES.

"How do you wire frames?"

C. E. Yocom—All the frames I ever wired had triangular top-bars. I pierce a hole near each end of the top-bar—about $\frac{3}{4}$ of an inch from the shoulder; also five other holes at equal distances between these. Treat the bottom-bar in like manner. Then I usually commence at the upper right-hand corner, by driving a $\frac{3}{8}$ inch wire nail, and securing one end of the wire to it. Pass the wire down through the first hole in the top-bar, across the frame through the first hole in the bottom-bar; pass to the right, up through the next hole in the bottom-bar, on up through the corresponding hole in the top-bar; pass to the third hole in the top-bar, down again, and so on until the holes have all been used, securing the end of the wire with another small nail. If the wire be drawn rather taut, the bottom-bar will be sprung up a little, which may be easily straightened, and at the same time draw all kinks from the wire. I use neither diagonal nor horizontal wires.

Mr. Draper—I have an even number of holes in the frames, and, when nailing them together, I leave a nail at each end of the top-bar up a little, to fasten the ends of the wire to.

SIZE OF FRAMES AND HIVES.

It was ascertained that nearly every one present favored the Langstroth size of frame, and 10-frame hives. Mr. Draper uses a larger hive, and says that he can reduce the size of it easier than he can increase the size of a small one. Mr. Draper exhibited a new swarm-trap of his own invention, which consists of a box with triggers and trap-doors, by means of which, it is believed, an issuing swarm may be led or forced into another box, to be hived at the leisure of the apiarist.

The convention then adjourned.

C. E. YOCOM, *Sec.*

The Voice of Hope.

Written for the Illustrated Home Journal,
BY MRS. LIZZIE A. VORE.

'Tis always proven if we wait, that sunshine follows night;
The darkest night must have a dawn, the longest lane must have a turn—
And the joys most sure and bright,
Are the joys we fairly earn.

Pin no faith to hand of Fate—trust not thou to luck for aid;
Falter not but bravely work, tho' thy path be rough and steep;
By ourselves, our lives are made,
God's sweet grace thy soul will keep.

God's sweet wisdom thee will guide; hew thy future out with care.
There are days of crushing woe, there are hours of deepest pain.
Work thou on with whispered prayer;
Thou a sure reward wilt gain.

Pasadena, Calif.

SPRAYING TREES.

Various Methods of Ridding the Fruit-Trees of Insects.

Written for the American Bee Journal
BY C. GERE.

As fruit-growing is my specialty, I will write a few brief notes from experience.

Spraying fruit-trees with arsenites is comparatively a new thing, and, like many new hobbies in bee-keeping, generally is run to the opposite extreme. Remember, I am writing from my own experience; if others have a better one, let them use it—I shall not disagree with them.

I have seen so much error on this subject, and it is copied from paper to paper, thus doing much harm. It is said to be the best remedy for all kinds of insects that infest all kinds of fruit-trees. This I very much doubt. The man who uses good judgment, is careful, cautious and orderly, can make a success of it on certain kinds of trees, but if he is not, he had better let it entirely alone, as it will kill the fruit, the leaves will drop prematurely, and smaller branches will be killed, even if the tree is not permanently injured.

The apple is the least sensitive of any to a dose of Paris green. I prefer this to any other poison. It should be sprayed a few days after the blossoms have fallen, as then the calyx end of the apple inclines upward, in which end the egg is laid. The spraying may be repeated again in 10 days or 2 weeks. Pears may be sprayed about the same time. I do not use it on cherries, if the trees hang full, as the insects can take one-half, and it will be all the better for the others, thus thinning the fruit. Those insects which we so much hate, are not always our enemies, after all.

I do not use it on plum trees, as I think that the jarring process is the safest and best, all things considered. This consists of a light frame covered with cloth to extend out as far as the branches extend, with an opening to admit the body of the tree. A sharp blow should be given on a large-headed spike, driven into the tree for the purpose. Repeat it every other day, as long as any curculios are found, commencing after the blossoms fall.

As to the remedy, not long since mentioned in the BEE JOURNAL, of saturating a yarn string with turpentine, and tying this around the tree—why, it is perfectly absurd, when we consider the fact that the curculio is perfectly able to fly from tree to tree, and from orchard to orchard.

In regard to spraying before blossoms fall, as given in Mr. Chas. A.

Green's Catalogue, I think that it is very bad advice, to say the least; however, it is not recommended by horticulturists, generally—in fact, I have never seen it in any other place, and I have had pretty free access to horticultural reading. Let us suppose that it would be beneficial, would it not go directly into the blossoms, poisoning the honey which would not only kill the bees, but those that eat the honey—perhaps yourself, family or neighbors, or even the one that did the spraying? This needs no comment. I answer as a fruit-grower and bee-keeper of 30 years' experience, with a decided "No!"

In regard to spraying later in the season for the numerous varieties of caterpillars, etc., that feed on the leaves—it is, in my opinion, perfectly useless, as the experienced eye can go along once a week between two rows of trees, and see the first work of the worms, even, when 2 or 3 leaves have been eaten. I can pick them off by single leaves, or a very small branch, and crush them with the foot.

Of all the insects that infest fruits, none are so hard for me to conquer, as the currant-borer. This brings me to hellebore as a remedy for the currant-worm. It will not do the work for me, not being poisonous enough. It takes more poison for the currant-worm than anything else that I know of, except the potato-bug. I use, for the currant-worm, ¼ of a teaspoonful to 2 gallons of water. It is hard to give the right amount to use, as it varies so much in strength. I think that the quantity, as generally given, is much too large; enough should be put in to color the water just a little, and no more. Do not think to make a sure thing of it, and put in more, for you will probably be sorry when it is too late.

Bees did very well here last season, and are very strong now, with every prospect for a good season.

Springfield, Pa., May 10, 1890.

NECTAR.

Its Origin, and Value as Food for Mankind.

Written for the American Bee Journal

BY J. M. HAMBAUGH.

As water is man's pure Heavenly beverage, so extracted honey is Nature's most delightful and health-giving sweet. How inspiring is Nature's process, by which is prepared this Heaven-born food! As the grand old luminary of day mounts the eastern horizon, the dew of the balmy night, as it were, to cleanse all impurities from Nature's flora, reflects like myriads of diamonds in the clear morning sunlight; and as the rustling winds shake from each tiny cup, its pearly dewdrop, and the warmth from the sun is being gently diffused over Mother Earth, the nectar suitable for the gods begins to flow from the corolla of each and every snowy-crested petal, and as we gaze upon the little-winged harvesters, gracefully flitting from bloom to bloom, we are filled with admiration, and wonder what there can be so enticing in those tiny petals, from which they love to sip. It is delicious honey!

"It is Nature's offering to man, distilled drop by drop in myriads of flowers, by a more delicate and perfect process than any human laboratory ever produced." And Nature's little harvesters are the most delicate and perfect of all gleaners, and are a marvel to the intelligence of antiquity, and to modern science.

Then let us not hesitate to place before our fellow-man this wholesome sweet, in its virgin purity, which can only be accomplished by the use of the extractor.

It should be the universal liquid sweet of every home in the land, in place of the vile stuff called "syrups," usually found upon the markets, which are not fit to take within the stomach.

Let every lover of justice, right and truth, *push* this most laudable enterprise, and see that extracted honey gains a verdict in popular favor which it so justly deserves; and let every honey-producer strive to place his product upon the market in the most inviting manner possible, and let his name accompany each and every package as a synonym of purity, and honest dealing.

Spring, Ills.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Late but Large Swarms.

Bees commenced swarming on May 1. Swarming-time is a month late. I hived 15 swarms so far. I never saw such large swarms—oh, they are fine. They are working with a rush. There is so much white clover.
G. B. CARTMELL.

Jackson, Tenn., May 19, 1890.

First Swarm—Cool Weather.

On Sunday, May 18, I had my first swarm in spite of cool weather and frosty nights. Bees are in good condition. I have 160 colonies to start with.
J. V. CALDWELL.

Cambridge, Ills., May 19, 1890.

Bee-Keeping in Mississippi.

Bees are in fine condition now. The winter was so mild that none were lost in this part of the country, but all colonies are strong and healthy, and also ready for our best honey-flow, which is from whitewood or poplar; but it has been raining so much that the bees have stored but very little honey so far. We have no clover, buckwheat, nor any kind of artificial pasturage in this vicinity, and consequently not a very large honey crop—only about 25 or 30 pounds per colony of comb honey, which sells for about 12 or 15 cents per pound; but I am going to keep bees as long as they do that well, for there is some profit in them, and I love to work with them so well that I cannot think of giving them up.
W. R. TATE.

Goodman, Miss., May 20, 1890.

Bee-Keeping in Minnesota.

Bees have not wintered or "springed" well in this locality. I think that about 75 per cent. of the bees have died within a radius of 4 miles of this place. One man had 24 colonies, and lost them all; another lost 23 out of 24; another, 15 out of 16; another, 7 out of 10, and some with a few colonies lost all they had. Albert Moses, who put into winter quarters 100 colonies, lost about 20 per cent. I lost 2 out of 11 colonies. My bees had the diarrhea badly, and spring dwindling has been bad also. We have a very cold, dry spring, so that bees have done but very little. To-day it snowed hard for about 2 hours, with the mercury at 34 degrees. I have a theory for the heavy loss in bees, but of course I do not know that I am correct. Last season was very dry, so that after basswood, bees did not store any honey worth speaking of, consequently the queens must have ceased laying early, and a great many of the bees died of old age, and I think that the honey was poisonous to them. Our prospect for white clover is very poor, and we do not look for much basswood, as the past two seasons have been good; however, the bee-business is a hopeful one, and we will continue to trust, and hope for the best.

J. S. McIntire.
Maple Plain, Minn., May 7, 1890.

Sowing Japanese Buckwheat.

On page 332, Geo. Frey asks a question about Japanese buckwheat. I would say that in this locality I aim to sow buckwheat about June 15. Last season I sowed 3 bushels of Japanese buckwheat on 5 acres, on June 17, from which I threshed 150 bushels of clean seed. I had 11 pounds of seed extra, which I sowed later at intervals, on the roadside, some of which was sown on July 17, and nearly all ripened. From the 11 pounds sowed, I got 10 bushels.

E. C. Eaglesfield.
Berlin, Wis., May 16, 1890.

Prospects Good for a Crop.

Our colonies are all strong, but it is so wet that they cannot gather much honey, or anything else. I have 26 colonies; had a swarm yesterday, and if we get some warm, fine weather, I will have several more swarms soon. I only lost one colony out of 27, having wintered them in chaff hives. The prospects are good for a honey crop this year.

J. A. Barnes.
Pardoe, Pa., May 19, 1890.

Late Swarming Expected.

My bees have wintered well—I lost but 2 small colonies out of 46. They began to build up quite early, but of late we have had so much rain and cold weather that they are nearly idle. Apple trees are not yet in bloom here, and swarming will be very late, I think.

John K. Rich.
Cato, N. Y., May 20, 1890.

Wet and Cold Weather.

My bees have just commenced to work on apple bloom. I had to feed them from April 26 until May 15. Early breeding run them out of stores. They did not get to work more than one day on fruit-bloom, on account of wet and cold weather. It is still raining here. The meadows and pastures are getting white with clover. If the weather would be favorable, I think that the bees would soon store lots of honey. They will be very late swarming this season.

Joseph A. Weeks.
Young's Creek, Ind., May 19, 1890.

Discouraging Prospects.

My bees wintered splendidly, but as the spring has been so cold and dry, so that they could not gather much honey, they have to be fed, at least some of them, and now, as the white clover is coming into bloom, I hope that they will gather a little honey; but it looks very discouraging, as last night we had a hard frost, and it is so very dry.

John Haskins.
Empire Prairie, Mo., May 16, 1890.

White Clover Just Blooming.

Bees are doing better here than ever before at this time of the year. The hives are full of apple and wild-plum honey. Young bees and drones are flying thick, and white clover is just coming into bloom.

G. W. Wilcox.
Hopkins, Mo., May 14, 1890.

The Season's First Swarm.

I had my first swarm for this season on Friday, May 9. The swarm issued during my absence, and either absconded or returned. However, I had a *swarm.*

Will M. Barnum.
Angelica, N. Y., May 12, 1890.

Putting on the Supers.

I stored 35 colonies of bees in the cellar last fall, and they came out in fine condition this spring, except one colony, in which the queen had died. The spring has been rather cold, and very dry, and the bees have done well, the hives being well filled with brood, and drones are flying, so I will look for swarms soon. When is the proper time to put on the supers?

Samuel Law.
Winterset, Iowa, May 13, 1890.

[Put on the supers as soon as the bees are numerous enough to gather the harvest, and the honey-flow has commenced.—Ed.]

Cool Weather—Results in 1889.

I commenced with 15 colonies, spring count, in 1889, increased my apiary, by natural swarming, to 50 colonies, and had 2,000 pounds of honey in one-pound sections. I wintered the bees on the summer stands, and now have 48 colonies, 2 having died. Both of the colonies were lost last fall, when I found them to be queenless. My bees are doing well. I think that I will have swarms by the 20th, if it does not keep too cool. The weather is very cool at present, for this time of year. It snowed some to-day.

C. W. Baker.
Martinsville, Mo., May 6, 1890.

Raining Nearly Half the Time.

I put 83 colonies into the cellar last fall, and took them all out this spring in very good condition. They are doing very good work at present, considering the chance they have to move, as it rains nearly half the time here, or has done so for the last 2 or 3 weeks. The prospect is very fine for a large crop of small fruit, and that means honey also, as well as berries.

Wm. A. Hodge.
Victory, Wis., May 22, 1890.

Bees Dying Very Fast.

In March, two colonies of my bees commenced dying. The oldest bees died first. It commenced in a colony reared from a queen that I received from an Ohio queen-breeder last July. The bees turn a dark, shiny color, and before they die, the bees haul them out of the hive. They are very much swollen, and are filled with a clear, watery substance, like very thin honey. The drones go the same way, and, I think, one queen. After the bees are pulled out, they keep still, except occasionally they jerk their wings as if alarmed; 2 colonies are nearly all gone. I have examined the brood carefully in all stages, and find nothing wrong with it; 2 of the colonies (there are 4 dying) are rearing brood about as fast as they are dying. All were strong colonies. After a night when the temperature is as low as 50 degrees, they die faster; some days, as much as half a pint die. All the colonies gather honey as fast as the number not affected would do in a healthy colony. No young bees die. The affected colonies are in different parts of the apiary of 42 colonies. Some days, scarcely any die, and then for several days they die very fast. Except the 4 sick ones, my bees are doing well. I think that there was not a day last winter that they did not gather honey and pollen. Now, what is the matter with my bees? and what is the remedy? A neighbor has one colony affected in the same way.

P. S.—May 13—I have looked over my 4 colonies of sick bees; 2 of them, I think, have lost a quart of bees each, in the last 24 hours; the other 2 have only about a quart each left. I see no cause why they should die.

P. W. McFatridge.
Ontario, Calif., May 12, 1890.

Wintered Well—but Starving.

Bees wintered well, but consumed a good deal of honey. There were a very few weeks but they were out for a flight during the winter, as it was a very mild one here. Our first honey for the bees was from the yellow willow; it started them to breeding nicely, and I thought that they would be in good condition to gather the main crop, which is from white clover. The weather was cold and wet for about two weeks, and the bees obtained nothing from fruit-bloom, they had consumed all their willow honey, and were in a starving condition before I discovered their real state. They were killing the drones and uncapping the brood. I began to feed them immediately. I find, by inquiry, that there are a great many bees starving in this neighborhood. I had 45 colonies, fall count, but doubled-up to 35 this spring. I am also working 25 colonies for my neighbor for part of the honey.

J. G. Creighton.
Preston, O., May 18, 1890.

The Results of Last Season.

Bees have wintered well in this locality. It has been a very open winter, and there has not been snow enough to make good sleighing. The past winter bees could fly most of the time when it did not rain and the sun shone. I started on May 1, 1889, with 24 colonies; I sold over 1,500 pounds of honey, and increased to 52 colonies. About one third of the honey was clover and linden, and the balance buckwheat and corn. Clover honey is sold for 15 cents per pound; buckwheat for 10 and 12 cents per pound. I lost only 2 colonies, one of which was queenless, and the other was robbed. It has been very wet this spring. It is raining now, and there is scarcely any grain sown here yet. Bees are carrying in pollen when it does not rain, and drones are running about the entrances of the hives. There is a good prospect for white clover, if frost does not injure it later on. I learn more out of the Bee Journal each week, by reading the experiences of others, than I could in one year by doing without it.

E. A. Henderson.
Greenfield, Pa. May 13, 1890.

Good Prospects for White Clover

We are having cold weather and frosts at night. Bees are in fine condition. I had my first swarm to-day; who, in Iowa, can beat this? The prospects for white clover are very good this year.

N. Staininger.
Tipton, Iowa, May 17, 1890.

Good Results in Bee-Keeping.

I commenced last spring with 20 colonies in Langstroth hives. I sold, and used in my own family, $350 worth of honey, and this spring I sold 33 colonies of bees for $110, the hives to be returned to me this summer after the bees are transferred into different hives. The hives will be worth to me at least $30, making in all 490; and I have 5 colonies left to start with again. I took off, last year, 2,700 pounds of honey, and sold it all in Morris at from 12½ to 15 cents per pound, besides a good deal that I did not count, where the sections were only partly full. The cold rains last September shortened my crop a good deal. My success with bees is wholly due to the instructions that I have gained by reading the American Bee Journal. It will pay every man to take it, who has one colony of bees.

H. C. Gifford.

Morris, Ills., May 13, 1890.

◆

Bees will Starve unless Fed.

My bees are cutting down young drones almost matured, by the hundred, and dragging them from the brood-chamber. On examination, I find the hives full of brood and young bees, but no honey. Owing to the mild winter, bees in eastern Ohio commenced rearing brood in January, and since that time they have consumed a vast amount of stores. Now they are destitute. On May 1, my bees had honey in abundance, but since that time we have had rain almost every day, and the weather has been cool and damp, and bees can gather nothing from flowers, from the fact that there is nothing to gather. It is my candid opinion, if bees are not kindly cared for until white clover comes in bloom, that one-half the colonies in Eastern Ohio will die of starvation.

Jacob Oswalt.

Maximo, O., May 21, 1890.

◆

Cold and Wet in Canada.

The bees came out in good condition this spring, but the weather has been very cold, and the last two weeks or more have been wet, so that the bees have been confined to their hives nearly all the time.

John Dewar.

Tiverton, Ont., May 22, 1890.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Doolittle on Queen-Rearing	2 00	1 75
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Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
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American Poultry Journal	2 25	1 50
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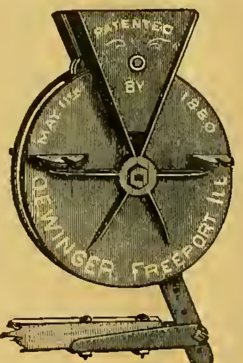

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HONEY AND BEESWAX MARKET.

NEW YORK, May 6.—Comb Honey is well cleaned up, with the exception of California 2 lbs., which sell at 10@11c per lb. Extracted is dull at 7c for California, white clover and basswood; Southern, 70@75c per gallon. Beeswax, scarce at 27@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, May 2.—Receipts of honey are light, and demand fair for choice white clover at 13@14c. Other grades are dull and neglected. Extracted, 6½@7½c. Beeswax, bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, May 20.—The demand for comb honey continues good. We quote: White 1-lbs., 14c; dark 1-lbs., 10@12c. Extracted, white, 5@7c; amber, 5@6c. Market is in good shape for new crop, which we look for next month.

CLEMONS, CLOON & CO.,
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CHICAGO, May 1.—Comb honey sells soon after arrival, if white and otherwise desirable, at 12, 13 and 14c; dark comb is slow at 8@10c. Weather is cool and seemingly favorable to its sale. Extracted, 6@8c, according to quality; some with no distinct flavor has sold at 5c. Beeswax—Yellow, about 27c; fancy, 28c; supply light. R. A. BURNETT, 161S. Water St.

MILWAUKEE, May 1.—Demand for honey is rather light. Supply is ample, of both comb and extracted. We quote: Best white 1-lbs., 13@14c; medium 1-lbs., 11@12c; common old 1-lbs., 9@10c. Extracted, white, in barrels and half-barrels, 7@8c; dark, in barrels and half-barrels, 6@6½c. Beeswax, 25@26c; supply light. A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, May 5.—One-pound sections, 14@16c; extracted, 7@9c. Demand good and supply likely to be exhausted before the new crop comes in. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, May 2.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
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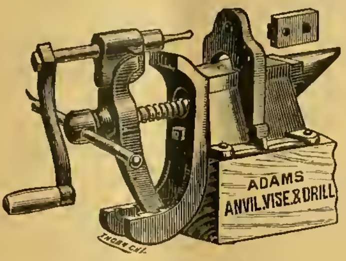

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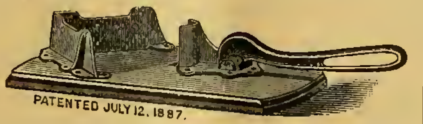
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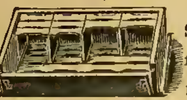

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REV. A. R. SEAMAN,
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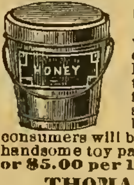
NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tape ring Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **Price, 75 cents per dozen, or $5.00 per 100.**

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Eighth Edition Just Published

New and Revised Edition

—OF—

BEES AND HONEY,

OR THE

Management of the Apiary

FOR PLEASURE AND PROFIT

—BY—

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

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☞ This new edition of our BEES AND HONEY will be given as a Premium for only **three new subscribers**, with $3.00; or clubbed with the BEE JOURNAL for $1.75.

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200 LBS. OF BEES
50 ITALIAN QUEENS at $1.00 each; Bees, 90 cts. per lb.
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Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,
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Knickerbocker Bee-Farm

SEND FOR

CIRCULAR AND CALENDAR FOR 1890,

To **GEO. H. KNICKERBOCKER,**
Box 41, PINE PLAINS, Duchess Co., N. Y.
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Mention the American Bee Journal.

Ah, There! One Untested Italian Queen, 75c., 3 for $2.00; Tested, $1.50. One Untested Carniolan Queen, $1.00, 3 for $2.50; Tested, $2.00. Bees by the pound and Nucleus. Send for Price-List. Reference—First National Bank. H. G. FRAME, North Manchester, Ind.
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Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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Carniolan Bees!

Pleasantest Bees in the World.
Hardiest to Winter.
Best Honey-Gatherers.

In order to introduce not only the bees but our paper,

"THE ADVANCE,"

We offer to any one who will send us $1.25, a copy of our paper and a nice Carniolan Queen. The Queen alone is worth $2.00. Address,

"THE ADVANCE," Mechanic Falls, Me.
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Mention the American Bee Journal.

BEE-SUPPLIES. Wholesale and Retail.

We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

4-Piece Dovetailed Sections!

IN order to close out our present stock of **4-Piece Dovetailed Sections,** 5¼x6¼—a trifle less than 2 inches wide—we offer them in lots of 500 for **$2,** or 1,000 for **$3.50**—either Narrow or Wide Tops. No fractions of 500 will be sold at the above prices. Our stock is limited, and orders will be filled in rotation as long as the Sections last. Order early.

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BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship.

Italian Queens and Bees at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

A. F. STAUFFER & CO.,
40Etf STERLING, Whiteside Co., ILL.
Mention the American Bee Journal.

CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf
Mention the American Bee Journal.

THE NEW HEDDON HIVE.

WE have a few of these Hives, complete, for sale at **$3.90** each—*to close them out.* We cannot fill any orders for them in the flat, nor these nailed ones, after our present stock is exhausted. The few we have are nailed and painted. Order promptly. Address,

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILLS.

SECTIONS **$3.00** per 1,000. Foundation, Alsike Clover Seed and Japanese Buckwheat, cheap as the cheapest. Special prices to dealers. Send for our FREE PRICE LIST. **M. H. HUNT,**
1Dtf BELL BRANCH, MICH.
Mention the American Bee Journal.

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From $2.50 to $3.50 per 1,000, and other APIARIAN SUPPLIES Cheap.

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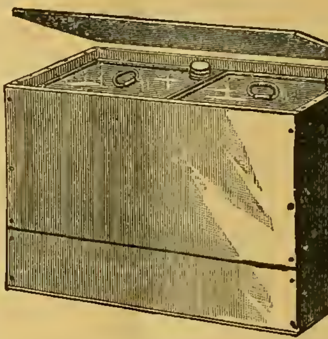
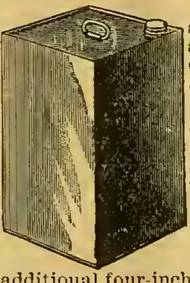
SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can ....(boxed).........	$ .45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans................	.75
12 boxes "	8.40
100 " "	65.00

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1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.
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FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Sample of Bees, 5 cts. Untested Queens, before June 15, $1.25; after June 15, $1.00. Tested (at least 3 bands), $2; Selected, tested (4 bands) $3; Breeding Queens (4 to 5 bands), $5.00. Virgin Queens, 50 cts.; 5 for $2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**
Mention the American Bee Journal.

LOST The old prices on Bee-Hives, and new ones found. Send for Circular—FREE.
14Etf **L. J. TRIPP, Kalamazoo, Mich.**
Mention the American Bee Journal.

PATENTS THOS. P. SIMPSON, Washington D. C. No atty's fee until Patent obtained. Write for Inventor's Guide
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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. June 7, 1890. No. 23.

EDITORIAL BUZZINGS.

Make home a *hive* where all beautiful feelings
Shall cluster like *bees* and their sweet honey bring,
Make it a temple of holy revealings
And love its bright angel with shadowy wing.

◆

The Honey Almanac is just the thing to use to sell your new honey, as soon as it is taken from the hives. Just order some printed, stating your crop of *new honey* is ready for delivery. It will go like hot cakes !

◆

An Accident. — Minnie Wagner, of Maiden Rock, Wis., wishes to give this notice, on account of a serious accident to her father :

> My father met with an accident, breaking his leg in three places, and is not able to write to those with whom he made arrangements for bees and queens. Please inform, through the columns of the Bee Journal, all those with whom such arrangements were made, to countermand the orders.

◆

Wise Apiarists, like the wise virgins of Holy Writ, did not wait until the last minute for getting in their supplies. Those who ordered hives, sections, etc., *early*, and had them on hand ready for use a month or more ago, are now happy—while those who waited until the rush came before ordering are now bemoaning their misfortune. All the supply dealers are now behind, and cannot fill orders promptly. The Lewis "fire" has made matters worse, and sections are very difficult to obtain anywhere. *All* must exercise patience and charity, and if possible, learn the lesson by experience, to order such goods another year, long before they are needed.

Poisoning Bees.—R. J. Campbell, of Danville, Ind., writes thus :

> Please answer this through the Bee Journal. If one puts out poison *expressly to kill bees*, is he not laying himself liable ? A man in this neighborhood says he has killed two bushels of bees this spring, and that he intended to kill all that will come to his bate.

Certainly ; such a vile miscreant could be sent to the penitentiary for such criminal acts. Suppose the bees, thus decoyed, should reach their hives and deposit some of the poison, thus "knowingly, wilfully and maliciously" fed to them "with murderous intent." It might very easily get mixed up with the honey in the surplus receptacles, and be carried off to market or be eaten by the family of the owner of the bees, and cause sickness or death, or both, to the innocent consumers of the article. In such a case, how quickly would the instigator of this plot be arrested and held liable to the law for his smart lawlessness ! Should there be deaths in the community from eating this poisoned honey, he may find his neck in the halter with no means of escape !

Such vindictive schemers are unworthy the name of men—for there are none of the characteristics of *manhood* about them. They are vile miscreants and detestible villains ! Their nefarious schemes of destruction show a state of degradation too low for contemplation ! They should be turned over to the custody of the law for safe keeping, and to protect the innocent from their criminality and venom.

◆

Dead.—The *Australasian Bee Journal* is discontinued. Subscribers are to be supplied with the New Zealand *Farmer*, which will devote 3 pages to bees hereafter to supply our New Zealand friends with bee-news. Messrs. Isaac Hopkins & Co., late publishers of the *Australasian Bee Journal*, make the following announcement in the *Farmer* for April, just come to hand :

> We regret being compelled, through the continued poor health of the editor, to announce the discontinuance of the *Australasian Bee Journal* in its original form. The readers of that journal will remember that Mr. Hopkins' health broke down some 15 months ago, the fact being mentioned at the time, and although it has improved considerably since, the head trouble still remaining, makes it absolutely necessary that he should give up all literary work possible for some time to come ; in fact, this should have been done long ago, but being anxious that the journal should be kept going, and hopeful of regaining his health and strength, he held out as long as possible.

◆

Postage on merchandise is too high. The rate in the United States is much higher than in any country in Europe, and Congress should reduce the rate to conform to the needs of those dependent on the mails for carrying such articles. We will formulate a plan and present it in our next issue.

Bee-Keeping for Profit, is the title of a new pamphlet of 50 pages by Dr. G. L. Tinker. This hand-book details his new system of management of bees in producing comb and extracted honey, and the construction of the hive best adapted to it, viz : his Nonpariel. In his preface, Dr. Tinker says :

> We take no credit for much that we have presented, for the modern system of bee-keeping is largely the outgrowth of the labor of many minds. Still we have presented a few things that are new, and if the industry of bee-keeping shall be in any way promoted by what we have written, we shall feel amply repaid for our labor.

The book is nicely printed, and will be read with interest by apiarists generally.

The subjects treated are as follows : Spring Management ; Protection ; Utilizing the Sunshine ; The Need of Plenty of Stores ; Stimulative Feeding ; The Brood-Chamber ; Transferring ; Building up Weak Colonies ; Preparing for the Harvest ; Fastening Foundation in Sections ; When to Put on Sections ; General Considerations on Swarming ; Early Swarming ; Swarming at the Opening of the Harvest ; The New System of Management ; Hiving ; Prevention of Increase ; Waiting Seven Days to Re-Unite ; Storifying the Supers ; Late Swarming ; Care of Queen-Cells ; Prevention of Swarming ; The Swarming Impulse ; Dividing Bees ; How to Get Increase and Get a Crop of Honey ; Producing Extracted Honey ; Drones Above Queen-Excluders ; Superseding Queens ; Taking off the Surplus ; Care of Comb Honey ; Doubling Up Colonies ; Introducing Queens ; The Extra Stories of Combs ; Care of Empty Combs ; Preparations for Winter, etc.

It can be obtained at this office for 25 cents, postpaid.

◆

The Bee-Keepers' Union being appealed to for counsel and defense in a threatened lawsuit in Homowack, N. Y., the General Manager gave the particulars of the case due consideration, and advised the apiarist how to proceed. The result is an amicable settlement of the matter, without process of law, and without expense. It is the silent *counsellor* of those in trouble—the *protector* for the injured—and the *defender* of the rights of apiarists when violently assailed ! It fights only when it is absolutely necessary. The Union deserves, and should have, the most substantial support of every apiarist.

◆

Naughty "Lizzie," down in Maine, is still sending out her baits to catch "suckers." Mr. Oliver R. Hawkins, of Bellport, L. I., has sent us one which was sent to him. He was of course too well posted to bite at the hook. He has been reading the Bee Journal too long to be caught in that way. She must look in pastures *green* for "dupes"—not among those who are *posted* !

GLEAMS OF NEWS.

The Census Year began June 1, 1889, and ends May 31, 1890. Each State has from one to eleven Supervisors' Districts. There are 175 supervisors in all. There are 42,000 enumerators, who in all parts of the country will begin their work Monday morning, June 2, 1890. Every farm will be visited before June 30, and the following questions will be asked, keeping in mind that the figures you are to give nearly all pertain to the crops of 1889, and *not* to the growing crops of 1890 :

1. Your name as occupant of the farm.
2. Are you owner, renter for money, or for share of the crops of the farm ?
3. Are you white or black ?
4. Number of acres of land, improved and unimproved.
5. Acres irrigated.
6. Number of artesian wells flowing.
7. Value of farm, buildings, implements, machinery and live stock.
8. Fences—Cost of building and repairing.
9. Cost of fertilizers.
10. Labor—Amounts paid for labor, including board ; weeks of hired labor, white or black.
11. Products—Estimated value of all farm productions sold, consumed, or on hand for 1889.
12. Forestry—Amount of wood cut, and value of all forest products sold.
13. Grasslands—Acres of each kind of grassland cut for hay or pastured; tons of hay and straw sold; clover and grass seeds produced and sold; silos and their capacity.
14. Sugar—Cane, sorghum, maple, and beet; sugar and molasses; acres, product and value of each.
15. Castor Beans—Acres.
16. Cereals—Barley, buckwheat, Indian corn, oats, rye, wheat; acres, crop, amount of each sold and consumed, and value.
17. Rice—Acres, crop, and value.
18. Tobacco—Acres, crop, amount sold, and value.
19. Peas and Beans—Bushels, and value of crop sold.
20. Peanuts—Acres, bushels, and value.
21. Hops—Acres, pounds, and value.
22. Fibers—Cotton, flax, and hemp; acres, crop, and value.
23. Broom-Corn—Acres, pounds and value.
24. Live Stock—Horses, mules and asses; number on hand June 1, 1890; number foaled in 1889; number sold in 1889; number died in 1889.
25. Sheep—Number on hand June 1, 1890, of "fine wool," "long wool," and "all other ;" number of lambs dropped in 1889; "spring lambs" sold in 1889; sold in 1889 other than "spring lambs;" slaughtered for use on farm in 1889; killed by dogs in 1889; died from other causes in 1889.
26. Wool—Shorn spring of 1890 and fall of 1889.
27. Goats—Number of Angora and common.
28. Dogs—On farm June 1, 1890.
29. Neat Cattle—Working oxen, milch cows, and other cattle on hand June 1, 1890; number of pure bred, grade and common; calves dropped in 1889; cattle sold in 1889, slaughtered for use on the farm, and died in 1889.
30. Dairy—Milk—total gallons produced on farm; sold for use in families; sent to creamery or factory; used on farm, including for butter or cheese; used on farm in raising cream for sale, including for creamery or factory. Butter—pounds made on farm and sold in 1889. Cream—quarts sent to creamery or factory; sold other than to creamery or factory. Cheese—pounds made on farm and sold in 1889.
31. Swine—Number on hand June 1, 1890; sold in 1889; consumed on farm and died in 1889.
32. Poultry—Number each of chickens, turkeys, geese, and ducks on hand June 1, 1889; value of all poultry products sold; eggs produced, sold, and value in 1889.
33. **Bees.**—Number of colonies, pounds of honey and wax produced, and value.
34. Onions—Field crop—number of acres, bushels produced and sold, and value.
35. Potatoes—Sweet and Irish, bushels produced and sold.
36. Market Gardens and Small Fruits—Number of acres in vegetables, blackberries, cranberries, raspberries, strawberries, and other small fruits, and total value of products in 1889.
37. Vegetables and Fruits for Canning—Number of acres, and products in bushels, of peas and beans, green corn, tomatoes, other vegetables and fruits.
38. Orchards—Apples, apricots, cherries, peaches, pears, plums, and prunes, and other orchard fruits; in each the number of acres, crop in 1889, number of bearing trees, number of young trees not bearing, and value of all orchard products sold.
39. Vineyards—Number of acres in vines bearing, and in young vines not bearing; products of grapes and raisins, and value in 1889.

Besides these questions on the regular Agricultural Schedule No. 2, Superintendent Robert P. Potter has ordered several special investigations in the interests of agriculture, among which are Viticulture, Nurseries, Florists, Seed and Truck Farms, Semi-Tropic Fruits, Oranges, etc., Live Stock on the great ranges, and in cities and villages ; also the names and number of all the various farmers' organizations, such as Agricultural and Horticultural Societies,Poultry and **Bee Associations** Farmers' Clubs, the Granges, Alliances, Wheels, Unions, Leagues, etc.

In no part of the census work have the lines been extended more than in the direction of agriculture, and if farmers will now cheerfully co-operate with the enumerators and other officials in promptly furnishing the correct figures more comprehensive returns regarding our great industry will be obtained than ever before.

As a part of the Census, special provision has been made by Congress for ascertaining the names of surviving soldiers, sailors, and marines who were mustered into the service of the United States during the war of the rebellion, and of the widows of soldiers, sailors, and marines who have died. In connection with this special census of veterans,the organization or vessel in which they served, the term of service in each case, and present residence will be taken by the census enumerators. In the case of widows, information regarding the service of their deceased husbands is also required.

The importance of accurate statements concerning the military record of each participant in the late war should not be underestimated. It should be the duty, moreover, of every veteran soldier or sailor to see that the enumerator is placed in possession of the necessary information concerning his own service. If he cannot be at home when the enumerator calls he should leave a proper memorandum in the hands of his wife or other member of his household, so that the work of the census may not be delayed, and also that there may be no doubt as to the accuracy of the statements concerning his service which may be given to the census enumerator.

QUERIES and REPLIES.

Do Foxes and Skunks Molest Bees at Night ?

Written for the American Bee Journal

Query 710.—Do foxes or skunks ever molest bees when clustered out at night in the summer season ?—Pennsylvania.

I think not.—M. Mahin.

I do not know.—J. M. Hambaugh.

Not in my experience.—Eugene Secor.

Some claim that they do.—G. L. Tinker.

I always take mine in at night.—R. L. Taylor.

No ! We would like to see them try it.—Dadant & Son.

I never observed. I hardly think that they would.—J. P. H. Brown.

I have had no experience in that line.—H. D. Cutting.

I have never watched to see, and I do not know of any one who has.—A. B. Mason.

I have never known them to do so. Skunks are common here ; foxes are very scarce.—A. J. Cook.

Well, now ! I have had no experience on that line.—C. H. Dibbern.

I never knew such to take place here. I do not believe that it is worth noticing anywhere.—James Heddon.

Skunks do, surely. I do not know about foxes, as there are none in my locality.—J. E. Pond.

They never molest mine, but, then, there are no foxes here, very few skunks, and my bees seldom cluster out.—C. C. Miller.

I think that possibly skunks might ; but a trap or two set near their haunts will "settle their hash."—Will M. Barnum.

Skunks eat bees, often to that extent that nearly spoils the colony. As the colony gets weaker, they scratch on the front of the hive, and when the bees come out to drive off the intruder, catch them. As to foxes, I could not say.—G. M. Doolittle.

Never, to my knowledge. Several years ago quite a number of skunks lived and reared young near my apiary, until an old colored man trapped them. They certainly never harmed my bees. There is a prodigious sight more harm from "two-legged skunks" to my apiary. The remedy is a double-barreled shot-gun, and I shall be tempted to use it.—G. W. Demaree.

Skunks will eat bees ; they often watch for them to come out of the hive and prey upon them. Why leave the bees "clustered out at night ?" It is doubtful if foxes ever catch bees.—The Editor.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

A Morning Vision.

BY MRS. LIZZIE A. VORE.

When the shadows still were lingering,
  Ere the Sun had kissed away,
With his warm and mellow kisses,
  All the night-mists from the day ;
Ere the sky with rosy blushes,
  Turned rejoicing towards the sun.
In the soft light, in the half light,
  Of a day but just begun.
In the peaceful, restful quiet
  Of an early summer morn,
Did my eyelids slowly open,
  Ere another Day was born.

And I lay and watched the new birth ;
  Watched the pearly tints of dawn,
Slip away into the shadows
  Where the grim night-shades had gone.
Heard the drowsy, sleepy twittering
  Of the robins in their nest,
Heard the green leaves stirring softly
  With the faint breeze from the west;
Saw the eastern sky grow rosy,
  As the Sun arose and smiled,
Pouring all its radiant splendor
  On the untried, new-born child.

Then I saw a wondrous vision,
  Saw the young Day, fair and bright,
Standing on time's well-worn threshold,
  In her spotless robes of white ;
With her pure eyes softly smiling
  On the sleeping sons of earth,
Innocent and free from evil
  On the morning of of her birth.
Then I turned and wept in sorrow ;
  For I knew the coming night
Would find an old Day—dying,
  Heart-sick, weary of the sight
Of earth's evil ; of its vileness,
  Of its misery, and its woe,
Knew the old Day would die sobbing,
  Asking nothing but to go.

Pasadena, Calif.

CORRESPONDENCE.

SWARMS.

Does Hiving on the Old Stand Induce Absconding ?

Written for the American Bee Journal

BY GEO. F. ROBBINS.

The replies to Query 706, on page 309, are almost unanimous to the effect that hiving swarms on the old stand does not cause them to abscond. I was impressed by this unanimity, because after foraging around about five years for a reason for the conduct of my bees, I had settled down to the opposite conclusion ; or at least that hiving on a new stand prevents it. The consequence of my conclusion is that the editor calls me superstitious. I will do nothing worse than to say, "You're another," and tell my story.

For several years my bees have tormented me by absconding, or swarming in from one to 21 days from the time of hiving. In 1886 I had nearly two dozen to abscond on the same or the next day, and nearly that many swarmed again, leaving brood and queen-cells within the three weeks. I sometimes looked into a hive a few days after putting a swarm into it, to find a lot of drone-comb. I hive on frames with starters and queen-cells started—with the brood-chamber half full of comb. For two years before, and for two years afterward, I was tormented in the same way. So far as I can remember now, all these swarms were hived on the old stands. I attributed the trouble to first one thing, then another, and tried to remedy the matter, until a swarm or two would come out and upset my theory.

Last spring the same old round began again, and in desperation I decided to hive on new stands. From that time on I had no trouble. Those are the facts in the case. Do they not form good grounds for my conclusion?

Hiving in contracted brood-chambers may have something to do with it, but I do not see why it should—at least until the brood-chamber is full, when I give them plenty of surplus room from the start. I think that my proximity to a creek bottom, with its great number of large, hollow trees, may cause them to abscond, and by getting the swarm away where the scouts cannot find it, I save it. It would seem that a new location would prevent the old queen from leading out another swarm in two or three weeks, if the contracted brood-chamber affects the matter. I think that swarms prefer a new home, even though in the same apiary.

My object in hiving on the old stand was, of course, to prevent after-swarms. In lieu of that, I hit upon the plan of hiving the swarm upon the stand of a colony that had quite recently cast a swarm. It worked with perfect success. I obtained all the benefits of the old system, and had no fighting, either. In a few cases I removed a weak colony, and put a new swarm in its place. Only once did I have any fighting, and that was quite early in the season. During the latter half of the season, I never hived a swarm except on an already occupied stand.

Mechanicsburg, Ills.

NEW YORK.

Report of the Cortland Union Bee-Keepers' Convention.

Written for the American Bee Journal

BY M. H. FAIRBANKS.

The Cortland Union Bee-Keepers' Association met at Cortland, N. Y., on May 13, 1890, at 10 a.m., with President J. H. Kennedy in the chair.

The minutes of the last meeting were read and approved, and the time was then occupied by further business, and receiving questions for the afternoon session, which was called to order at 1 o'clock. Opportunity being offered for new members to join, the meeting was then opened for general discussion.

The first question was, "What is the best plan to prevent increase ?"

J. H. Manchester practiced putting two prime swarms together. He also had practiced making colonies queenless in the heat of the honey season, then in the fall killed the bees.

Miles Morton did not not consider it a sin to kill bees.

W. L. Coggshall takes brood from the strongest colonies and gives it to nuclei.

"What is the best method of wintering bees ?"

Mr. Morton uses chaff hives packed with planer shavings, with a chaff cushion over the bees, and the entrances to the hives open the full width—⅜x14 inches.

"Is it advisable to let strong colonies swarm in apple-bloom, or use the brood to build up weaker colonies ?"

Mr. Morton said that he would equalize his colonies, and that June 15 is early enough for bees to swarm.

President Kennedy said that bees that swarm too early are apt to swarm again in the best of the honey season.

"What is the best method of handling increase ?"

W. L. Coggshall would sell the increase of colonies.

"Is it advisable to unite weak colonies in the spring ?"

Mr. Lansing said that he had saved colonies by so doing.

President Kennedy had practiced it to some extent, but did not have good results.

"What is the best method of getting the bees out of the supers ?"

Mr. Lansing takes them off one at a time, and shakes the bees out.

Mr. Morton drives the bees down with smoke, then takes the supers off, or as soon as possible, and then carries them to the honey-house, and the bees go out through a bee-escape.

"Is it advisable to divide colonies for increase ?"

W. L. Coggshall said not if worked for comb honey.

J. H. Manchester would divide, if increase of bees only was wanted.

"Is it practical to use sections holding less than one pound ?"

Mr. Bosworth said that he did not think it was, as it is just as much work to handle a small section as a larger one, and dealers did not want to pay any more for the small one.

Mr. Morton said that it would take one-third more foundation.

"Is it advisable to keep bees in during cold days ?"

Mr. Coggshall had practiced stopping up the hive-entrance just at night, with a handful of sawdust, and, in the morning, if the weather was favorable, the bees could make an entrance through it.

"Which is the most profitable race of bees?"

Mr. Manchester said that he would rather handle the Italians, as they were more quiet, and not so liable to sting as the blacks.

Mr. Coggshall thinks that the Italians might be better in a poor season; he had, with an assistant, clipped the wings of 82 queens in six hours, and they were black bees, at that.

"What is best to do with queenless colonies in the spring?"

Mr. Coggshall gives each a frame of brood, and lets them rear a queen.

Mr. Morton thinks that it would be best to keep them along by giving a frame of brood once in awhile, and give them a queen-cell from a first swarm.

"How shall I keep the grass down in front of the hives?"

Mr. Coggshall used sawdust with good results; others had used salt.

The convention then adjourned till sometime in August, when the Association will hold its annual basket picnic at the Floral Trout Park, in Cortland, N. Y.

M. H. FAIRBANKS, *Sec.*

BRACE-COMBS.

Burr-Combs—and How to Prevent Them.

Read at the Oxford, Ont., Convention

BY S. T. PETTIT.

In all improperly constructed occupied hives, may be found, in addition to the orthodox brood and drone combs, two other kinds, viz: brace-combs and burr-combs.

Now, to get rid of, or, more properly, to prevent the building of the troublesome brace and burr combs, it would be well to inquire into the cause of their construction, or into the conditions most favorable to their construction, or, in other words, why they are built.

The brace-comb (if it may be called a comb) is intended for a very different purpose from that of the burr-comb; the former is constructed in position for just what its name implies, *a brace*, and the latter, ultimately, for store combs.

If during a honey-flow some sealed honey be placed a little closer together than the bees placed it, they become alarmed, and to prevent more crowding, and to keep things in position, they go to work and build *brace-combs* in the (now) too small bee-spaces.

Upon examination, brace-combs will be found to be studs of hard wax with, in some cases, a touch of propolis possessing no small degree of resisting power. Brace-combs will usually, also, be built in all undersized bee-spaces, so the cause of their presence in almost all cases is quite apparent.

With regard to burr-combs, if we investigate the matter, we will discover the reason why the wayward little workers do so persistently persist in building them. We all know, I presume, that bees are severe economists, and most exacting in that line—they economize heat, time, and everything pertaining to their welfare—every available particle of sweets, and everything that can be utilized by them, is eagerly gathered and stored; but in nothing are they more economical than in the space enclosed within the walls of their domicile; it is their inherent nature to occupy and utilize every space larger than a bee-space within their homes—especially so is this the case at, or near, the top of the brood-chamber; and now, just at this point, I would ask, is not the cause of the presence of burr-combs apparent? And does not the remedy suggest itself?

My experience, extending over quite a number of years, says that the cure is at our finger ends; is easily understood, is unpatented, and may be had for the taking—simply adjust all the interior parts of the hive so that a proper bee-space is maintained throughout, and the goal is reached—the joy is yours; for under these conditions there is neither room for burr-combs, nor supposed necessity for brace-combs, and but very few of either kind will be built.

Frames are spaced by different parties all the way from 1¼ inches to 1½ inches from center to center; so it will easily be seen that in order to form proper bee-spaces, top-bars must be of different widths, according to the spacing practiced.

Top-bars ⅞ of an inch square, and spaced 1⅜ inches from center to center, will form spaces ½-inch by ⅞-inch, and he who expects that bees will not economize such roomy spaces at the top of the brood-chamber, has failed to note one very important characteristic in bee-nature, and will simply be disappointed; like noxious weeds, his crop of burr-combs will grow, until these spaces are nearly full, and super ventilation well-nigh choked off.

But what about deep top-bars? Will one inch or so of depth prevent burr-combs between the top-bar and the super? Well, now, I am aware that this point should be approached charily; so many experienced bee-keepers regard depth of the top-bar as having great virtue in that line, but with all due respect for the opinions of others, I will frankly state that after 6 or 8 years of experience with thick and thin top-bars, I am pretty well convinced that the virtue is not in the depth of the top-bar, but in *correct spacing*. Although my real frame has a top-bar about ½ inch thick, my ideal frame has one only ⅛ of an inch in depth, and of the necessary width to form a correct bee-space.

Most bee-keepers, I believe, regard five-sixteenths of an inch as *the* bee-space; well, I will not quarrel with that, for it is worthy of notice that the bees themselves, as yet, are not fully agreed as to what a proper bee-space should be; but I would add that it must not be even a shade more than five-sixteenths of an inch—anywhere between nine thirty-seconds and five-sixteenths will do; but between the top-bars and the supers nine thirty-seconds of an inch has my decided preference. The top half of the end-bars should be of the same width as the top-bars, and the lower half tapered down to the width of the bottom-bar. The end-bars of all my frames are all so made now.

In all fairness, it should be admitted that some colonies seem to have a peculiar fondness for burr-combs, and, under almost any conditions, some embryons will appear in the hives of such bees.

Belmont, Ont.

TEXAS.

Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal

BY J. N. HUNTER.

The Texas State Bee-Keepers' Association held its 12th annual meeting in Greenville, Texas, on May 7 and 8, 1890, about 40 bee-keepers attending.

The convention was called to order by President W. R. Graham, and prayer was offered by Dr. W. K. Marshall, of Marshall, Tex. The reading of the minutes of the last annual meeting was dispensed with.

It was found, upon inquiry, that those present, had about 800 colonies of bees. Then questions were asked to ascertain as nearly as possible the average amount of honey obtained per colony the last season, and it was found to be 30 pounds—a very poor showing for here. It was reported that all the bees owned by the members had wintered well; but unfavorable reports were made as to the spring condition of bees, starvation seeming generally to prevail amongst them; at present, however, signs of prosperity were being shown.

Various interesting apicultural subjects were profitably discussed, among them being the following: Feeding Bees; Swarming; Honey—Comb and Extracted; Marketing — Style and Manner of Putting Up Honey; Bee-Hives; Extractors and Smokers; Locality for Bee-Keeping, etc.

The election of officers for the ensuing year resulted as follows: W. R. Graham, President; H. B. Furbee, Vice-President; G. A. Wilson, Treasurer; and J. N. Hunter, Secretary.

It was decided that the time and place of holding the next meeting should be left to the Executive Committee; also, that we as bee-keepers would make an exhibit of bees, honey, and bee-fixtures at our next annual meeting.

The convention was very much saddened on account of Judge W. H. Andrews being kept away from the meeting by reason of severe illness, being one of the oldest members, and his first absence since the association was organized. Suitable resolutions of condolence and sympathy were introduced by Dr. W. K. Marshall, and adopted, and a copy of them ordered to be sent to Judge Andrews. [They were published last week on page 347 of the American Bee Journal.—Ed.]

D. W. Yeager, also a member of the Association, died on April 24, 1890, and similar resolutions were offered.

The convention then adjourned until the next regular meeting.

J. N. Hunter, *Sec.*

CHAFF HIVES.

Heavy Rainfall—Prefers Large Hives.

Written for the American Bee Journal

BY S. J. YOUNGMAN.

Chaff hives and out-door wintering have scored another point, as the first swarm in this vicinity came from a chaff hive to-day—May 24—in my apiary. Drones first made their appearance on May 10, and the bees bred up very rapidly on forest bloom. The plum and cherry are now at their best; the apple is just opening, and will be very abundant, and with the bees as strong as in basswood time, they will undoubtedly gather some surplus from that source.

Some of the colonies have starved to death, and nearly all lack in stores, as we have had so much cloudy and rainy weather. I will give a few figures concerning the amount of rainfall the last four days:

Wednesday, May 21, one inch; Thursday, May 22, one inch; Saturday afternoon and evening, 1½ inches—total, 3½ inches of rain on the level. How is that for a rain? It almost equals the day of Noah! I think if that swarm had not been hived, and had been out in all that rain, the bees would have been sadly demoralized.

ADVANTAGE OF LARGE HIVES.

Now as to large hives: My hives are mostly the Quinby style, and the most are two-story, and have 14 frames, a few, however, have but 8 frames. Now, the 14 frames are covered with bees, and have, of course, a large amount of brood; the 8 frames are only filled with bees, and probably contain only about one-half the bees and brood that the large ones have. The bee-keeper can draw his own conclusions—two bees are better than one, at this time of the year!

Lakeview, Mich., May 24, 1890.

QUEEN-REARING.

Several Ways of Rearing and Introducing Queens.

Written for the American Bee Journal

BY C. A. BUNCH.

One of the most common ways of rearing queens is to give a comb of eggs and just hatched larvæ to a queenless colony; this will produce some good queens, but a part of them will be inferior in size and prolificness, as the bees will commence the construction of too many cells; also the just-hatched workers must have their share of food, which should go to perfect the growth and laying-qualities of queens.

Of all the artificial methods of queen-rearing that I have tried, I like the Alley plan the best; that is, to have the cells built in a row, about 15 cells to a full colony. Cells built in this way are uniform in size, and probably as good as the best.

Natural-swarming cells are as good as any; they can be had by giving combs of brood to the colonies that we want to breed from, to cause the bees to swarm; the queens and half of the swarm to be hived on combs of brood, to cause them to swarm again if we want more cells; and the other half of the swarm to be returned to the old colony, to help finish the cells. This last plan I have practiced quite a good deal, and I find that one breeding queen will furnish a great many cells in a season, as a general thing.

INTRODUCING QUEENS.

If I had a valuable queen that I wanted to introduce to a colony of bees, I would open the hive that had the queen to be superseded, and remove the queen, close up the hive, and let the bees get quiet and flying; say half an hour after the queen was removed, pick up the hive and carry it a rod or more away to a new stand. This will draw the old workers away from the hive, which can unite with a hive near by, or go to a hive and comb of brood on the old stand. The queen can now be introduced with a Peet cage, or some cage that has the entrance closed with the "Good" candy.

Another way to introduce queens that is the least trouble, if we should happen to go away from home for that purpose, is this: Open the hive, remove the queen to be superseded, put back the frames, blow smoke between the frames, so as to drive the bees down to the bottom of the hive; now place the cage between two of the central brood-combs near the top of the hive, the entrance to the cage to be stopped with bee-candy. Now blow smoke on the queen and cage, and close the hive, which should not be disturbed for 3 or 4 days, and if no honey is coming in, the hive should not be opened for a week. If the bees keep on building cells after the queen is introduced, it is a pretty good sign that the queen is being neglected; if such is the case, the combs of brood should be exchanged for combs with no unsealed larvæ, which will bring the workers "to time."

Nye, Ind.

BEE-CULTURE.

A Woman's Experience in the Keeping of Bees.

Written for the American Bee Journal

BY AUNT MARY.

It is seldom that people know the good they do, and, if so, they do not get thanked for it; but I want to return to Mrs. L. Harrison my sincere thanks in this public manner for what she has done for me. About nine years ago I often found articles in the *Prairie Farmer* from her pen, in regard to bees; and they gave me the "fever" to have some. I knew nothing about bees, only that the honey was delicious, and that they would sting. I did not know a drone from a queen or worker; and my husband said that if I got them, I must take care of them entirely, for he did not mean to be stung!

I procured a colony, watched them, and read everything pertaining to bees that I could get hold of, saying that "if Mrs. Harrison could handle them, I could learn something about them."

The first year my colony died in wintering, and seven years ago I obtained another colony. My two sons were at home, but if they looked towards the bees, they would dodge. One advised me to sell them, and get some honey; the other said that I had better keep hornets, as they were good stingers; but I kept on "in the even tenor," saying, "I will show them."

I often was terribly stung, and learned that hot water applied at once was the best thing I could do for it.

After the first year I had plenty of honey for family use, and some to spare. The bees have paid their own expenses ever since, and much more.

For the first two years, my family called them "mother's bees," but since then they call them "our bees," and now, as the boys are married and gone, and my husband has passed over to a "better land," I am alone to care for the bees. I employ a man to assist in swarming-time.

I put 28 colonies into the cellar last fall, and all came out alive this spring. They give me a good support, and something to do in my lonely life. My friends call them my "play-things." I would rather hear the sound of their swarming, than a piano, any time. I always get the premium on my honey at fairs, when I take it, and I then sell the samples for a good price.

I make my own sections, using the one-piece kind. I can unpack, dampen, put together, and pack away, 60 in an hour, and not hurry. I never hurry with my bees.

There is plenty of pin money in bees, for any woman if she has the nerve and patience to attend to them.

Hastings, Minn., May 26, 1890.

RACES OF BEES.

Their Historic Origin and Individual Superiority.

Written for the American Bee Journal

BY C. J. ROBINSON.

Which, if either, of the several differently-named domesticated bees possess merits that render them superior, intrinsically, especially in northern cold climates.

This long and much-mooted question will ever continue in the order of affairs, a disputed problem. Extravagant claims have been, and vigorously continue to be, heralded by bee-fanciers who, like mothers, are blinded by partial love of their baby that they nurse and pet.

It should be borne in mind that all hive-bees are true lineal descendants of one original family—a restricted species. We can only speculate as to date and place of origin, presuming that they may have existed in the Garden when Adam in his glory basked in his Eden home, and, that Noah shipped colonies on board the ark to preserve and perpetuate the race; however, in that case, the shipping of "two of a kind" could not have been a compliance with the spirit of the Lord's mandate, for it required "three of a kind" to multiply and save the race from becoming extinct. Worker-bees are inevitably one factor jointly with male and female in the reproducing of the kind. The seeming error of putting only "two of a kind"—male and female—on board the ark, must have been the fault of the recorder, Moses, for the Author does all correct. For ought we know, the creation of bees occurred subsequent to the Deluge, providing there occurred no error in the account given of the Flood.

The notion entertained by many that bees, as well as plants, are indigenous in different parts of the world whenever a peculiar type is found—a type peculiar to some country or parts of the world, is most fallacious—void of reason.

It would be well to learn, if we could, the natural traits of the antique bee—its nativity and its attributes while in its primitive state, to the end that we might have a correct idea of its sphere or circuit of action assigned it by the Creator.

Like other creatures, bees show more or less difference as between specimens of the natives of different countries, but there is no radical or constitutional difference—no fundamental attribute of nature in one of the different types or breeds, that is not inherent in each and all domesticated bees. The differences observed is not that of inborn nature—only a divergement limited within certain fixed bounds ordained by Nature. Hence, breeding with a purpose to produce a new breed or strain specially superior, cannot be successful beyond the *par excellence* of the species—the "coming bee" is a myth.

Here arises a problem—the question being whether or not each of the differently named types of domestic bees are alike susceptible of being bred up to an equally high plane one with the other.

Since the importation of the so-called Italian and other-named yellowish bees, dating back to 1859, the native American bees have been generally accused of being very much inferior, compared with the imported yellow types; yet the accusations have not, nor cannot be, demonstrated. The difference claimed in favor of the popular transatlantic types, is based more on mere fancy than on fact. A popular error over-rides truth every time, and prejudice is the one great error. It was James Heddon who nobly championed the merits of our native bees; he wrote: "The coming bee will have native blood in it," or language to that import. None who are half as competent as is Mr. Heddon, dare, or will, attempt to gainsay his asserted prophecy.

Referring to the date of the earliest existence of bees, we can only mention that such date is anterior to prehistoric time's ending. No indications of the existence of bees have been found in the rocks of the cretaceous period, nor have the fossil remains of bees been discovered in rock or earth deposits of any period.

Concerning the antiquity of domesticating bees, we are only able to trace the use of bee-hives through historical ages to ancient Egypt. The natives of primitive Egypt knew nothing of language, but in their crude dialect the picture of a honey-bee was one of the characters called "hieroglyphics," and represented Lower Egypt, restricted to an island in the river Nile at its confluence with the Mediterranean Sea, and called by the Greeks the Delta. This symbolizing of the hive-bee affords us the remotest data of its existence, and points to the whereabouts of their origin or first appearance on this globe.

With the ancient Egyptians the picture of a queen-bee was the emblem of royalty, and is evidence that the realm of lower Egypt, the Delta, was the sovereign mother country anterior to all Egypt becoming one kingdom under Sisostris. If the cradle of humanity stood on the Delta, as is claimed by eminent historians, it is conclusive that Egypt was the cradle of the primitive Israelites, who were the nucleus of the subsequent mighty nations of Nineveh and Babylon, from whose loins the world are peopled, and we may logically reason that the original nursery of the hive-bee was in the Eden of the Israelites. Probably bee-culture was coeval with the arrivals of Abraham and Joseph, and the exodus of the Israelites.

Whether the primitive bees were of a yellow type is a query. It seems probable that the original nucleus multiplied and spread up along the valley of the Nile, and also eastward over the Isthmus of Suez into Syria, and those were the progenitors of the so-called Syrian bees. Thence they were taken and spread along the eastern coast of the Sea, and crossed the channel on to the Island Cyprus, and these were the progenitors of the famous Cyprian bees. Thence the progeny of the original stock spread into Greece and into Italy. The Holy Land bees are identical with the Syrians—indeed, there is but a fancied difference in the yellow-marked bees. The reader may query how it came about that such a contrast exists as is seen in the colorings of specimens of one and the same species; in answer, I call attention to the contrast in cattle and sheep, as well as in almost all creatures.

Color is secreted between the cuticle and true skin, and the pigment thus secreted gives color to the skin and its appendages—hairs, feathers, etc., the colorings being a creature of accident—not dependent upon certain constitutional elements peculiar to species, race or breed, but dependent upon the secretive function of the lining of the skin—an aberration more or less common to all creatures—fickle as the coloring of the clouds.

We know of no type, breed or strain of bees that is at all constant in reproducing, identically, progeny like the parent specimens. This fact settles the claim that hive-bees of every name and nature are true lineal descendants, and should be treated as having but one common origin.

BEE-FEEDERS.

The Cause of Loss Among the Bees in Winter.

Written for the American Bee Journal
BY JAMES HEDDON.

Mr. S. J. Youngman (see page 353), like many other Michigan bee-keepers, thinks that a spring bee-feeder is needed. I, too, had to feed a good many hundred pounds to keep my bees breeding, and, in fact, to keep some of them from actually starving. I have two different feeders that are just as handy as can be, and from which bees will eat in cold weather in winter. The feeders are filled without coming into contact with the bees during the operation.

I have no engravings with which to illustrate, and I hardly feel as though space ought to be occupied with a lengthy mechanical description, which, in the end, would not be well understood; but I merely write the above to inform Mr. Youngman and other bee-keepers, that such excellent feeders are in use all over the country.

The inspiring motive of this article was not so much bee-feeders, as the question of loss in wintering. I quote the following from Mr. Youngman's article: "Bees, here in Michigan, usually gather large quantities of pollen in autumn, and, if wintered outside, they will commence breeding in March." Yes, they do, after such warm winters as last winter, but if severely cold they commence dying in March, and they keep on dying through April, and they die from the effects of eating the fall pollen. So the "pollen theory" comes to the front once more, and it turns out to be true on every corner.

Last fall was a pollen fall; hives were stored with it; the winter was warm, and bees flew frequently, where they were wintered out-doors. They unloaded as fast as they filled up, and they wintered well. Bees in special repositories usually winter better in warm than in cold winters—that is a rule. The reason is, that most bee-keepers do not keep the temperature in their repositories high enough, except in warm winters.

Well, last winter, just as Mr. Youngman says, cellar-wintered bees perished in large numbers, and, during the spring, dwindled badly. Of course they dwindled. Spring dwindling is nothing more nor less than the "tail end" of winter loss. I feel sure of that.

Had last winter been as cold as the winter about five years ago, not one colony in 25 wintered out-doors (whether packed or not) would have come through alive, in this part of the State. Pollen was everywhere in the hive, and the low temperature forces the bees to exercise; the exercise causes waste of tissue; waste of tissue causes the consumption of the nitrogenous pollen, which was plentiful, as said before. This pollen loads the intestines, and if no chance to fly and unload them is offered, the disease above-mentioned is the result.

Dowagiac, Mich.

FOUL BROOD.

A High Estimate of Prof. Cook's Article.

Written for the American Bee Journal
BY J. E. POND.

The article on "Foul Brood" by Prof. Cook, on page 350, should be read by every bee-keeper in the land. It not only gives the *rationale* of the disease, but also that of treatment, and must, I think, show those who either have no knowledge whatever, or an imperfect knowledge at best, the cause (so far as at present understood) and the means of ridding an apiary from this great plague.

It is of little use for the ordinary bee-keeper to bother his head with the origin of this disease, or for any one to publish fine-spun theories as to its age. We all know the results that will inevitably follow, allowing it to run its course unmolested; and with that knowledge, and the means of cure gained, nothing more is needed by the practical man. Let those who have the time, philosophize over the matter. It is enough for us plain bee-men to know consequences and means of eradication.

In my judgment the article is well worth putting into pamphlet form, as a means of putting it into the hands of every bee-keeper in the country, and also preserving it for future use. I thank Prof. Cook for the plain and simple way in which he handles the subject, and he deserves not only my thanks, but the thanks of us all. I hope that some means may be taken to put the article into the hands of every bee-keeper in the country.

North Attleboro, Mass.

[We quite agree with Mr. Pond as to the excellence of the "Foul Brood" matter referred to. It is already published in pamphlet form by the Michigan State Agricultural College, and we think can be obtained by any one sending for it. It was copied from that College "Bulletin" into the AMERICAN BEE JOURNAL.—ED.]

MISSOURI.

The Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal
BY J. W. ROUSE.

The Missouri State Bee-Keepers' Association met in Marshall, Mo., on April 16 and 17, 1890. The convention was called to order by President R. B. Leahy. The proceedings of the previous meeting and the Secretary's financial report were read, both of which were approved.

The committee on adulteration of honey, reported by reading Section 3,879, of the Revised Statutes of Missouri (1889), relating to adulteration of food and drinks. On motion, the report was received, and the committee discharged.

A letter was then read from Mr. C. P. Dadant, Secretary of the International American Bee-Association, calling attention to the importance of affiliating with the International, which, after due consideration, was decided to be done.

The proceedings of the convention were then suspended to give an opportunity to any to become members, and 35 new names were taken.

SHOULD ANY PERSON KEEP BEES?

An essay by Mr. James Heddon, of Dowagiac, Mich., was read, entitled, "Should any person, so desiring, keep bees ?" The affirmative was taken, that any one had the moral or legal right, but not the moral right to move into an already occupied range; also that every person should not attempt to keep bees, on account of inability, incompetency, or neglect. The following discussion then occurred :

J. H. Jones—I believe that a man has to be adapted to the business, love it, never tire to talk of it, or be afraid of bee-stings.

The Secretary modified the question thus: "Is it profitable for anybody, or everybody, to keep bees ?"

R. G. Robertson—Any one who is not so nervous as to fight the bees when they come about them; fighting the bees will cause them to sting the family and stock. Some men are born bee-keepers—some are made. Some are not born, nor ever can be made such. A man ought to have a fancy for it, and study it, to make it profitable.

P. Baldwin—My experience is that many farmers have not the time to give the attention that bees need, and when their bees fail, often claim robbery on the part of others.

H. C. Williams—I believe that many should be discouraged from keeping bees, for their own good. If they use the improved hive, and make a close study of the business, it would be well enough for them to keep a few colonies.

G. P. Morton--I am opposed to anyone going into the business unless he expects to make a close study of it. Lack of study and application causes too many failures; also causes honey to be brought to the market in inferior shapes and conditions, thus depreciating the market and prices.

R. B. Leahy—The question is, "Should this convention recommend any one to keep bees who so wishes ?" Every one who rears bees as a business knows that all bee-keeping as a side-issue is a detriment to the business, runs down the breed, keeps the prices down, etc. The side-issue man is never with us in improvements of any kind, and what they sell at, we have to follow. Side-issue men say that they do not care if they do not produce much honey; such men are a detriment to any business, and would better keep out of it. I think that beginners, who want to learn and make it a business, should be encouraged.

PREVENTION OF HONEY ADULTERATION.

The Secretary then read an essay by Dr. C. C. Miller, of Marengo, Ills., on "What measures should bee-keepers take against the bogus-honey business ?"

After quite an interesting discussion on the subject, it was decided that a committee of three be appointed by the association to draft resolutions expressing the sentiment of the convention, as to the adulteration of honey; that a copy of the resolutions be forwarded to other associations, and an effort be made to secure their co-operation in making it a national question.

A number of interesting questions were discussed, after which the committee on resolutions reported the following :

WHEREAS, It is known to this Association that extracted honey is largely adulterated with glucose and grape sugar, and that in our opinion the practice is damaging to the producers of honey in this State, and a fraud on the general public, therefore be it

Resolved, That this Association does emphatically denounce the practice of adulterating extracted honey with glucose and grape sugar; and

Resolved, That we urgently request the bee-keeping associations of the different States, and others, to co-operate with us in pressing this subject to the consideration of the International American Bee-Association, that they memorialize Congress to pass laws regarding the matter.

Resolved, That a copy of these resolutions be sent to each State bee-keepers' association, and to others.

The resolutions were adopted, and the Secretary instructed to send resolutions to the Secretary of each State association, with request to report their answers at our next meeting.

Mexico, Mo., was selected as the next place of meeting, and October was chosen as the time.

J. W. ROUSE, *Sec.*

OUT-APIARIES.

Locating and Managing Them to the Best Advantage.

Read at the Ohio State Convention

BY J. B. HAINS.

The subject of "Out-Apiaries" is one of much importance to the apiarist who finds the number of his colonies increasing to the extent that the locality is becoming overstocked, and threatens in the near future to become unremunerative unless they are separated, and out-apiaries established.

There are many such apiarists who have seen the average yield of honey gradually diminished as each year the number of their colonies have increased and the rapidly disappearing forest has decreased the bee-forage. Then come these questions: "Shall out-apiaries be established ?" "Where shall they be located ?" How many colonies may profitably be kept in each locality ?" "Shall they be managed for the production of extracted or for comb honey ?" "Shall there be an assistant placed in charge of each out-apiary, or shall the apiarist with less assistance assume the management himself ?"

Now as by request, and of necessity, this essay must be brief, it will be restricted to the last-named method, it being most approved by the writer, after having tested all methods in his 12 out-apiaries during the last 10 years.

In the selection of a locality, the near proximity of forest is of great importance—of course, having reference to the honey-producing varieties; swampy and untillable land in the vicinity is a valuable feature.

The next most important question is to secure the consent and co-operation of a land-owner in locating the apiary, which should consist of not more than 50 colonies, so placed as to be at all times under the observation of the family, whose interest should be enlisted by contributions of honey for the table, or by a money consideration for their watchfulness, and hiving an occasional swarm which may unexpectedly issue. I say "occasional swarm" for by this method, swarming is almost if not altogether prevented.

On the first appearance of white clover, or the bloom which furnishes the first light-colored honey, the upper story of the hives should be filled with frames of light-colored combs, or frames filled with wired foundation. No further attention need be given them until the bees in the home-apiary, or among the neighbors, indicate that the swarming season is at hand, when frames of new comb or wired foundation should be packed in hive bodies or in boxes, loaded on a spring wagon, taken to the out-apiary, and exchanged for combs containing honey which are taken home and extracted; and the next day, carried to out-apiary No. 2, exchanged in like manner, and so on until all out-apiaries are thus treated. No further attention is required for a week or 10 days, according to the flow of honey, when another visit is necessary, exchanging frames of comb for frames of honey as before, giving increased ventilation at the entrance.

When the honey season is at its best, and bees are most likely to swarm, give ready access to the hive, abundant ventilation, and plenty of empty combs for storing honey. There is nothing like plenty of room, plenty of ventilation, suitable shade, and the absence of drone brood and comb, to prevent swarming.

When the swarming season is practically at an end, exchange frames of comb for frames of honey as before, and leave them undisturbed until the season arrives to contract and equalize stores for winter.

I must not forget to mention that at each manipulation all queen-cells are to be removed. The advantages to be derived from this method are many. Much valuable time is saved; but one set of extracting tools is needed.

No extracting being done in the apiary, no building is needed except an open shed with a roof to protect from rain or sun. A lawn tent has served my purpose well, and I have mostly dispensed with shelter of all kinds. No robbing is started, as is often the case where the extractor is used, and time taken sufficient to take combs from the hive, extract and return them, as is usually practiced.

Bedford, Ohio.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Season Not Encouraging.

The season here is not now encouraging. Bees went through the winter well, but the elements are against us just now. What may come, remains to be seen. For myself, I still am troubled with rheumatism, and expect to be so troubled always, *bee-stings* as a remedy notwithstanding. Allow me to congratulate the AMERICAN BEE JOURNAL, which is still prospering and growing more prosperous. As a bee-periodical it is still ahead; its motto might well be *Dirigo*—the Director. J. E. POND.

North Attleboro, Mass., May 26, 1890.

Moving Bees on a River.

The bees were located on the bank, and all prepared to close the entrance at dark. Four small row-boats were all ready, the hive-entrances closed, and all on board by 9 p.m., and all floated out into the stream. There were 40 strong colonies, and were moved 15 miles *via* the river to their new location. All were put ashore, and on the stands about 100 feet from the river bank; all done and the entrances opened as the sun's rays in the morning began to appear. They were all safe without a mishap or a broken comb, and the bees were out in their new fields without the loss of one hour to them, for they were returning to their hives laden with honey and pollen before the sun was half an hour high.

This method of moving bees, to establish out apiaries along the rivers would be, I think, far the better method when so situated to avail of this way of moving them; and the best fields are most usually found along the streams. The expense is very light; a small, flat lighter costing but a few dollars, will carry 50 colonies, and all their fixtures.

There are thousands of locations in the United States that could be used in this way, and made useful, and cheaply available for this out-apiary work. Try it, some of you who contemplate the production of honey as a specialty, for you must take your bees to the fields if you hope for success. JOHN CRAYCRAFT.

Astor, Fla., May 24, 1890.

Honey Prospects in England.

Bees have wintered well here in England, and are in good condition for the coming season. The weather could not be better. We are looking for a good honey season, and I hope you in America will have the same. W. T. CRAWSHAW.

Welwyn, Herts, England, May 5, 1890.

Creating a Demand for Honey.

The Honey Almanac is upon my desk. I find it just the thing to create a demand for honey. Every bee-keeper should obtain a number of copies to distribute among customers. It is just the right size to be carried in the pocket. It contains a number of valuable recipes, and many fine illustrations. J. M. YOUNG.

Plattsmouth, Nebr., May 27, 1890.

Cold and Windy.

For the past three weeks it has been rain, rain, cold and windy all the time. This, together with honey-dew for winter stores, has brought the bees down to remnants of colonies all through this section. We had a flood here yesterday.

The new edition of your book, "Bees and Honey," came to hand last week. You may well be proud of it. It is like all of your work—of the highest class.

G. M. DOOLITTLE.

Borodino, N. Y., May 21, 1890.

Good Prospects.

Bees are working well. Prospects for a big honey crop are now favorable. I only lost one colony out of forty, wintering in the cellar. We work here mostly for comb honey—people are prejudiced against extracted honey, and would rather pay 16 cents for the comb honey than 10 cents for the extracted. Folks generally do not know everything about the sweets.

W. S. NARDING.

Mason City, Iowa, May 26, 1890.

Putting Bees in too Early.

Perhaps some will remember my letter on page 204, in reply to remarks of Dr. C. C. Miller, in which he said that he had never known of anybody having put their bees into winter quarters too early, and, if there was such an one, he would like to hear from him. My reply was that I believed I was that "one," as my bees were in bad condition, and I did not, at that time, think that half my colonies would live until spring. Now I write this to "take it all back," as every colony of my 33 lived through, and are doing nicely at present—not having dwindled any to speak of. I do not know how to account for it, unless the bees were breeding all winter, and came out strong in young bees. I ask Dr. Miller's pardon, and will try to remember that children (in bee-keeping) may be "seen," but should not be "heard" very much—only to ask questions.

Bees have commenced swarming, and all are building up *very* fast. White clover is all right, and the prospect is exceedingly good. S. H. HERRICK.

Rockford, Ills., May 24, 1890.

Heavy Loss in Winter, etc.

Bees are working lively upon fruit-bloom this morning. There has been a great loss of bees in this part of New York by spring dwindling; I think that it is safe to put the loss at 50 per cent., and there are many weak colonies. The weather has been cold and very wet; farmers are blue, as well as bee keepers, and not much has been done toward getting seed into the ground. There is a fine prospect for white clover, and we hope to soon have weather that will enable us to go forward with our work.

I am pleased with the weekly visits of the BEE JOURNAL, and I am sure that its standard of excellence will progress in the future as in the past. JOHN H. MARTIN.

Hartford, N. Y., May 20, 1890.

Colonies Strong in Bees.

We have had a great deal of rainy weather during apple-blossom time, so that the bees could work only a part of the time; but I never saw them stronger in bees at this time of the year, though light in stores. The prospect for white clover is good. I started into the winter with 38 colonies, and lost 4 by starvation, and one by being queenless, which leaves 33, all of which are in good condition excepting one, that nearly starved during a long wet spell. I do not have time to give my bees the attention that I would like, as I do all my own work on a 55-acre farm.

C. A. WRIGHT.

Little Prairie Ronde, Mich., May 25.

Losses of Bees in Wintering.

My bees seem to be doing well so far; drones have been flying strong for some time, but the weather has been cold and backward, and rather dry. The early fruit-blossoms were frost-bitten, but the late fruit seems to be all right yet. I look for early swarms and lots of honey. All the bee-men that I have heard from lost a few colonies during the winter, or this spring. One man—a good bee-man—who had one of the largest apiaries here, lost over 100 colonies of bees last winter, by having them buried in the ground without ventilation enough. I wintered my bees in the cellar, and some were late swarms of last year—as late as Aug. 22—and I did not lose a colony. IRA N. LYMAN.

St. Peter, Nebr., May 22, 1890.

Bee-Keeping in Louisiana.

Our honey crop for this season (1889) will, I do believe, fall short by more than one-half of what it was last year, and I think that it will reach but about one-fourth of last year's yield. The cause of the shortage is due to the freeze which visited our section of country about March 2 and 3, 1890. The cold wave was so severe that the live-oak trees which were in bloom, also the willow, orange, plum, blackberry, cherry, peach, etc., and clover, which was also beginning to put upon itself its snowy whiteness, had to succumb to the frost and ice. Hardly had a week passed after the freeze, when all vegetation, grass and trees looked as though fall had passed, and winter had set in. When trees began to sprout again, after the freeze, hardly if any blossoms appeared; and clover (although it has been in full bloom since it was laid low by the cold) secretes but little honey. So far as I have been able to ascertain, the crop in this State will be a very short one. JOHN HAGER, JR.

Arabi, La., May 24, 1890.

Severe Frost—Little Swarming.

Bees in Alabama, this spring, had to contend with a severe freeze in March, which destroyed much brood, and in consequence of which they have swarmed but little. They seem to be doing well now.

J. R. McLENDON.

Naftel, Ala., May 15, 1890.

Bees in Good Condition.

My bees are in the best condition that I ever had them at this time of the year. I lost none in wintering, and have had 3 swarms, which is very rare for this locality—swarming generally commencing about June 10 to 20. Here my first swarm issued on May 11. H. E. HESSLER.

Syracuse, N. Y., May 24, 1890.

Excessive Swarming.

I have only 3 colonies of bees, and only one of them is worth anything, the other 2 are very weak, and I do not expect any swarm from but the one colony, which will be sometime in June. The outlook for my apiary is slim, as the bees are in a very poor condition. The cause of it was excessive swarming the previous season, and too small hives. With large hives, I hope to soon have the apiary on its old footing again. O. R. HAWKINS.

Bellport, N. Y., May 27, 1890.

Cool and Windy Weather.

This is certainly a very peculiar season. There is an abundance of white clover, and it is blooming everywhere, yet we are feeding our bees at this date. Owing to the extraordinarily cool and windy weather, fruit-bloom yielded but little honey; and as the same state of things (but slightly modified) still prevails, bees are not getting enough honey to supply their every-day wants; consequently, they are not making that advancement so necessary to secure a full crop of honey. Our winter loss was 3 colonies out of 148. W. J. CULLINAN.

Quincy, Ills., May 26, 1890.

Bee-Keeping in North Carolina.

Our bees have been in fine condition since Jan. 1. They gathered more honey in January and February than in March and April. May, which is our best spring month, came with a fine crop of bloom—tulip, locust, gum, persimmon, and the scattering white clover that grows in the waste places. The cool nights, followed by windy days, kept us out of any surplus. June gives us a small surplus when the weather is right, from sumac, cotton and sourwood; the latter is of small amount here, but a little west of this place there is an abundance, and it yields a honey not surpassed by any I have ever seen; it is white, and well flavored. We also get a fair surplus from a late variety of sumac and cotton in August. The only crop that encourages a bee-keeper here is the wild aster, which blooms in October, and only lets up when a hard frost comes.

Bee-culture is in its infancy in this part of the country, but quite a little interest seems to be manifested. Our people will not read, which causes such slow progress in this the most interesting—and in some degree profitable—business one can engage in. Men often take the fever, and on the spur of the moment invest some money, and fail to post themselves, and the result of course is failure to start with. If we could get our people to start right, it would not be long until quite a sum could be added to the commerce of our land. We can keep bees at half the cost that the Northern bee-keepers can. Our surplus is not more than 30 or 40 pounds per colony, but we can sell extracted honey at 10 cents and comb honey at 12½ and 15 cents per pound, which will pay very well.

A. L. BEACH.

Pineville, N. C., May 27, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, May 6.—Comb Honey is well cleaned up, with the exception of California 2 lbs., which sell at 10@11c per lb. Extracted is dull at 7c for California, white clover and basswood; Southern, 70@75c per gallon. Beeswax, scarce at 27@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, May 2.—Receipts of honey are light, and demand fair for choice white clover at 13@14c. Other grades are dull and neglected. Extracted, 6½@7½c. Beeswax, bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, May 20.—The demand for comb honey continues good. We quote: White 1-lbs., 14c; dark 1-lbs., 10@12c. Extracted, white, 5@7c; amber, 5@6c. Market is in good shape for new crop, which we look for next month.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, May 1.—Comb honey sells soon after arrival, if white and otherwise desirable, at 12, 13 and 14c; dark comb is slow at 8@10c. Weather is cool and seemingly favorable to its sale. Extracted, 6@8c, according to quality; some with no distinct flavor has sold at 5c. Beeswax—Yellow, about 27c; fancy, 28c; supply light. R. A. BURNETT, 161S. Water St.

MILWAUKEE, May 1.—Demand for honey is rather light. Supply is ample, of both comb and extracted. We quote: Best white 1-lbs., 13@14c; medium 1-lbs., 11@12c; common old 1-lbs., 9@10c. Extracted, white, in barrels and half-barrels, 7@8c; dark, in barrels and half-barrels, 6@6½c. Beeswax, 25@26c; supply light. A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, May 5.—One-pound sections, 14@16c; extracted, 7@9c. Demand good and supply likely to be exhausted before the new crop comes in. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, May 2.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.

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◆

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

◆

Music.—Messrs. White & Smith Pub. Company have been sending out some very fine new music, among which are the following:

"Love's Golden Dream Waltzes," on the beautiful song, by Lindsay Lennox. It is very pretty. Price, 60 cents.

"Amour et Printemps," by Emil Waldtenfel, is a minor, and is one of his sweetest pieces. Price, 60 cents.

"The German Patrol," by Eilenberg, is one of the most popular pieces of the day. Beginning far in the distance, it grows louder until the climax is reached, when it gradually dies away to only a breath of tone. Price, 50 cents.

"Glittering Dewdrops," by H. S. Bentley, is a light, airy mazurka; brilliant, carrying an exquisite melody. Price, 40 cents.

"Col. Goetting's Grand March," by the young composer, Fred E. White, shows talent. The modulation is somewhat rough, but time will remedy this fault in Mr. White's composition.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

Advertisements.

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We have a few of these Hives, complete, for sale at **$3.90** each—*to close them out.* We cannot fill any orders for them in the flat, nor these nailed ones, after our present stock is exhausted. The few we have are nailed and painted. Order promptly. Address,

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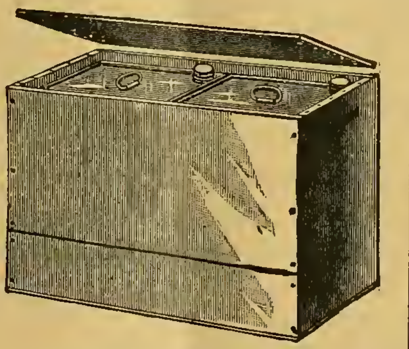
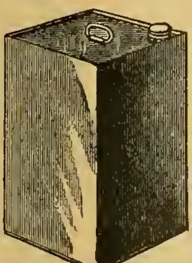
SQUARE HONEY CANS



The above illustration shows the 60 pound Square Honey Cans which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can .... (boxed)	$ .45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans	.75
12 boxes "	8.40
100 " "	65.00

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New and Revised Edition
—OF—
BEES AND HONEY,
OR THE
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14E4t 23C2t Light Street, Columbia Co. Pa.

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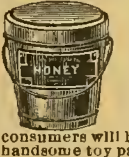

THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **Price, 75 cents per dozen, or $5.00 per 100.**

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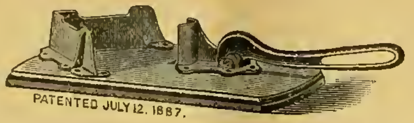
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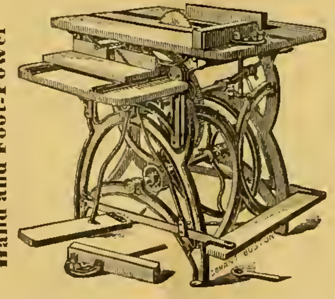

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AFTER HIAWATHA.

BY SECOR.

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In the field of apiculture,
Stop a moment, please, and read this,
Stop and read this advertisement.
Send and get my creamy MONTHLY,
(I will send three samples gratis)
It contains the views of leading
Bee-men on some special topic;
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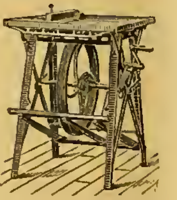

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

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Watertown, Wis., Jan. 1, 1890. 1C1y

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☞ Tenth annual Catalogue now ready.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. June 14, 1890. No. 24.

Dr. Miller is done in "the half-tone process," and so appears in *Gleanings* for June. The Doctor looks quite natural, but we must say that we do not like that "process." There is not one picture in a dozen done in that way that suits our fancy. We would like to feel differently about it, if we could.

Rubbing a Sliced Onion over new tin is recommended for making labels stick to it when ordinary flour paste is used. Try it, and report how you find it to act after—say a month. We have tried several methods, but usually found that after a few weeks the labels would come off. Perhaps the onion will prevent this.

☞ The ILLUSTRATED HOME JOURNAL for June is as bright and charming as any of its preceding issues. The table of contents is so extensive as to make it out of the question to reproduce it in this note. The reading matter is all crisp and entertaining, and the illustrations are numerous and of a very pleasing character.—*Argus, Fargo, Dakota.*

☞ Minnie Wagner's letter published on page 379 of last week's BEE JOURNAL, refers to an accident to her father, but she failed to state his name, making the notice of no value. We are sorry to say that it refers to our friend, the Rev. Stephen Roese, of Maiden Rock, Wis. He had been moving some logs and one caught in a tree-top, swung around and caught his leg, breaking it in three places. He suffered agonies, no one being near at the time; after crying for help, the pain caused him to faint. Friends heard him a mile away—came to the rescue, and took him home. We are glad to report that he is now doing as well as could be expected.

Postage on Merchandise in the United States is one cent per once (16 cents per pound). Congress ought to reduce this at least one-half. In this branch of the postal business, the United States is behind every country in Europe.

In England, parcels are mailed at 6 cents for one pound, 9 cents for two pounds, etc. There is no reason in our paying such high rates, and the postage should be lowered immediately by Congress. An exchange makes the following suggestions which we endorse, and ask our readers to act upon *at once:*

A bill for this purpose was introduced in the House of Representatives last year by the Hon. W. W. Grout, of Vermont. But to insure a favorable report it is necessary to impress on the Members of Congress the fact that lower postage on seeds, plants, bulbs and merchandise is generally demanded by the public. Will the readers of this please write a personal letter to the Hon. Mr. Sawyer, who is chairman of the Committee on Post-Offices and Post-Roads, and to the Representative of their own district, and if possible one or more to the other Members of Congress, urging them to favor such reduced postage? The result of this law will be to save you 8 or 10 cents per pound on merchandise you buy by mail, thus enabling you to get goods at a reasonable price for transportation.

(Write a letter similar to this, fill out the name, and address it simply Washington, D.C., as follows):

Post-Office———, State———,
Hon. ———, Washington, D.C., June— 1890

DEAR SIR:—I hope you will favor the bill to reduce postage on merchandise. The present rate, 16 cents per pound, is excessive. Eight cents per pound be an improvement, and 4 cents only a fair price. I earnestly and respectfully urge that you will aid this reasonable request in behalf of the people. Also give us paper fractional currency for use in the mails, and money orders up to $5 for 3 cents.

Very truly yours,
———.

The International Fair and Exposition at Detroit, Mich., will be held from Aug. 26 to Sept. 5. At the request of the Association, we have consented to act as Judge of the Bee and Honey Department. Circumstances over which we had no control prevented our attendance last year. This was a disappointment to our many friends in attendance. We trust that nothing will intervene to prevent us from carrying out our engagement this year. We will state the day of attendance when we are informed about it—but presume it will be on Aug. 30 or Sept. 1.

Bees and Honey.—This work, by Thomas G. Newman, has just been revised. It has been largely re-written, and is fully up with the times. It contains 250 pages, and is well and fully illustrated. Of course, being published by Thomas G. Newman & Son, its typographical appearance and binding are par excellent. It is written in Mr. Newman's vigorous style, and fills an important place in bee-literature.—*Gleanings in Bee-Culture.*

Seasonable Hints for Beginners are given in the *Intermountain Horticulturist* for June, published by John C. Swaner, in Salt Lake City, Utah. Under the heading of the "Production of Comb Honey," Mr. John H. Snider (a correspondent) remarks as follows:

When the honey-flow commences, put on the super, contract the brood-nest if necessary, and compel the bees to go up into the sections. When the first super is nearly full of honey (do not wait until it is capped), raise it up and put an empty super under, or between the first one and the brood-nest.

By the time they need more room again, the first one you put on the hive will be completed and you can remove it, drive the bees out, and carry it into the honey-house, empty it and refill with new sections, and put it where needed.

As the season draws to a close, collect your unfinished sections together as much as possible, and place them on the strongest colonies, take dummies or contracting boards out of the other colonies and replace them with frames filled with comb foundation, and you will very likely get some nice combs to extract, and the empty combs will come in handy next season for swarms.

Clean all propolis off your sections, and grade your honey; select the best quality and crate it by itself; then select No. 2, crate and mark it; those partly full or unfinished, you can extract and use them again next season, or cut them out and sell as chunk honey, just as you choose; but it does not pay to use any sections that are daubed and stained.

Now is the Time to prepare for disposing of the anticipated honey crop, which, if it comes at all, and in its usual way, will leave but little time to provide the necessary receptacles for marketing. When getting ready to order the proper shipping-crates, pails, kegs, cans, etc., needed to contain the honey for shipment and delivery to the consumers, do not forget to include a liberal quantity of the "Honey Almanacs." These should be generously distributed in advance, if possible, where you expect to sell honey, and then leave an extra copy when the honey is delivered, to be handed to a friend or neighbor of the purchaser of the honey.

Nothing yet published in the line of apiarian literature has so much aided the producer of honey to dispose of his crop, as these magnificent "salesmen"—"Honey Almanacs;" and when their trifling cost is considered, it will be found to be the most inexpensive way of advertising for the home honey market.

Send 5 cents to this office for a sample "Almanac," with a host of excellent unsolicited testimonials from those who have tried the "Honey Almanacs," and hence know and appreciate their great value as an aid in creating a demand for honey in every locality. Then try at least 100 copies, and let them speak for themselves among your desired customers.

See the last page of this number for prices, etc.

GLEAMS OF NEWS.

In New Zealand and Australia the seasons are the reverse of ours. There the honey harvest is gathered during our winter, and there bees are now in winter quarters. A protracted drouth has prevented the bees from gathering much honey, and in fact they have needed *food* in some localities. The New Zealand *Farmer* for April sums up its estimate of the honey crop thus :

> From the few reports yet to hand, and from private sources, we learn that throughout New Zealand the crop of honey harvested has been very variable. In some parts it has been quite up to or a little above the average, while in other parts—and these appear to be the majority—it has been considerably below the average ; so that, judging roughly, we believe, on the whole, the aggregate crop will not reach more than ½ or ⅔ of an average season's crop. In the Australian colonies, from the few reports to hand, we gather that the result of the season's work is somewhat similar to that of New Zealand. We learn that in some cases there has been a good taking, when in others again the season is almost a failure. We certainly anticipated, in the early part of the season, that the yield for New Zealand, at all events, would have been much above the average ; and no doubt it would have been but for the fact of the large portion of the honey not being extractable.

Basswood from the Seed.—On page 148, Mr. C. F. Miller asks for information about growing basswood trees from the seed, and in reply thereto we now offer the following, taken from one of our many agricultural exchanges :

> In growing basswood from seed, a little shade is usually necessary while the plants are young and making their second and third set of leaves. Gather the seed in the fall as soon as ripe, and then mix in about as much pure sand as there is of seed. Place all in boxes and then bury in some dry place in the open ground, covering only a few inches deep, or deep enough to keep out the mice and prevent alternate freezing and thawings.
>
> In the spring, as soon as the weather is favorable, sow seed and sand together in wide drills, made with a hoe, and about the width of the blade. Cover with fine, light soil to the depth of a half-inch, or a little more, then spread brush along over the rows, just thick enough to give a little shade to the young plants. When the plants are 4 or 5 inches high, remove the brush and give frequent cultivation during the summer.
>
> Wild rabbits and many other animals are fond of young basswood plants, and this is probably why so few seedling trees are found in the woods.

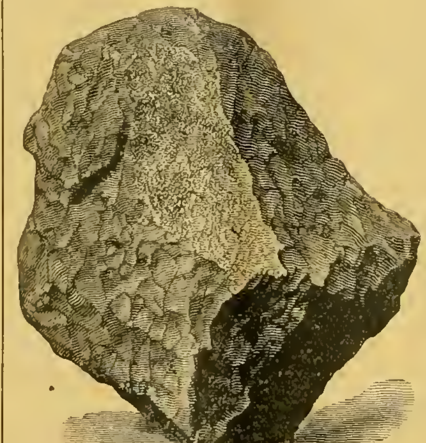
We trust that the above will fully answer the querist, and many others who have enquired as to the *modus operandi* in growing basswood from seed. Let all who can do so, endeavor to have plenty of these young honey-trees in their neighborhood, to furnish the bees with an abundance of nectar in due season.

A Heavenly Visitor.—Hon. Eugene Secor, of Forest City, Iowa, has presented us a stone—a visitor from some heavenly body. Of it he remarks thus :

> This Aerolite was found in Winnebago County, Iowa. It fell in a meteoric shower on May 2, 1890. The largest specimens found, weighed, respectively, 80 and 66 pounds. They were imbedded in dry, hard prairie about 3 feet. Two, weighing about 10 pounds each, were also found. Smaller ones, varying in size from a pea to a goose egg, were found, scattered over the prairie for a couple of miles west of where the large ones fell. All resembled this one both in outward appearance and inside structure. EUGENE SECOR.

We shall prize it as a treasure. What an immense journey it must have made to get to our planet ! Where did it come from ? is the question. As no one can answer it, it will always remain a question.

We have prepared an engraving from a photograph sent us by our friend Secor, of the one weighing 66 pounds, and here present it to our readers.



It resembles the light gray granites in appearance. The outside of the pieces is blackened, and it does not easily rub off.

It feels "heavy," and if it came from other heavenly bodies, it proves that they are composed of similar material to our earth. This is a very natural conclusion, however, if the earth was originally thrown off from the sun when in a red-hot condition. When contemplating these things we are lost in wonder, and must conclude that we know but little of our surroundings, as well as of our past, present and future.

☞ Jacob T. Timpe's descriptive Circular and Price-List for 1890, of the five-banded Golden Italian Bees is on our desk. His sample bees sent to us was noticed on page No. 291.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

Statistics.—The usual spring report of statistical information is given in *Gleanings* for June 1, and is summed up as follows :

> A summarized statement is as follows : The average percentage of loss among the special reporters during the past winter is only 8⅔ per cent.
>
> By referring to the statistics of a year ago, we find that the loss was 9 per cent. We expected to see a smaller percentage for this year.
>
> The only losses, with few exceptions, that occurred during last winter, of any account were from over-breeding and consequent starvation. If we eliminate this cause of mortality, the percentage will probably be very low.
>
> The average loss in the vicinity of the reporters, we find to be 14 1-6 per cent. Last year at this time it was 17 per cent.
>
> Perhaps it will be interesting here to compare the average losses of the three preceding winters, since we began the department of statistics.
>
> The special reporters' loss during the winter of 1887 was 16 per cent. ; during 1888, 9 per cent. ; during the winter of 1889, 8⅔ per cent.
>
> The locality losses for the winter of 1887 were 33 per cent. ; for 1888, 17 per cent. ; 1889, 14 1-6 per cent. It is to the credit of the books, periodicals, and progressive apiculture, that the winter losses have been decreasing.
>
> Although the reports do not show it, we notice by correspondence that there has been a heavy loss in the region of Gallupville, N. Y., many bee-keepers losing all their bees.
>
> One bee-keeper said his Italians, because they gathered nothing but white stores, wintered beautifully, while his blacks and hybrids, having gathered a lot of honey-dew and buckwheat, almost all died—a great score for Italians, because they will get white stores if there is any possibility of doing so.
>
> We also gather from correspondence that there have been quite heavy losses in certain parts of Minnesota.

It is Often quite important to know the colony from which a swarm has issued, when such has not been noticed when issuing. Dzierzon prefers this method of ascertaining :

> After it has been hived and removed to its new stand, let a cupful of bees be taken from it and thrown into the air, near the apiary, after having sprinkled them with flour ; they will soon return to the parent colony, and may easily be recognized by their standing at the entrance fanning, like ventilating bees.

☞ "Frank Leslie's Illustrated Newspaper" for last week contains 14 pages of handsome illustrations, not to include those in reference to fashion and other specific subjects. Some depict summer pleasure haunts in southern Michigan, and a double-page illustrates the new town at the foot of the Cumberland Mountains in east Tennessee.

If the Surplus Cases are on before the honey flows, swarms will be less numerous, more especially if the sections are furnished with foundation, to attract the bees, and the entrance enlarged to aid ventilation.—*Western Bee-Keeper*.

A June Morning.

BY MRS. M. J. SMITH.

Hark to the basso of bumble-bees
Out in the new-blown clover !
Bumble-bees, *honey-bees* in their flight,
Skimming the wide fields over,
Hiding in buttercup's golden heart,
Then in a bed of daisies,
Laden with gold-dust, full of sweets
Gathered in flowery mazes.

Hark to the concert ! The merriest birds
Down in the orchard greenery,
Glad as ourselves, are welcoming back
June, with her gorgeous scenery.
Little ones peep over feather-lined walls,
Chirping a glad good morning,
Peering 'twixt trembling pearls, to see—
Pleased with the earth's adorning.

All of the flower waifs, great and small,
Straighten and grow in sunlight,
Roses are fragrant, and see, oh, see
Lilies with petals snow-white.
Hundreds of tiny swelling buds,
Each of them with a mission,
Welcome the zephyrs and sunbeam's gold,
Making our earth elysian.

Nature is clad in her best array,
Taking her yearly outing ;
Who could be sour or cross to-day ?
Who could be sad and doubting ?
Who could go scolding or freting, sure ?
Who could greet sharply a brother,
On such a beautiful day, when all
Out-of-doors smiles to each other.

—*Vick's Magazine.*

QUERIES & REPLIES.

Contracting Brood-Chambers, and Using Queen-Excluders.

Written for the American Bee Journal

QUERY 711.—1. Does it pay to contract brood-chambers in producing comb honey? 2. If it does, is a queen-excluder between the brood and sections necessary?—Ohio.

No.—MRS. L. HARRISON.

1. Yes. 2. Yes.—EUGENE SECOR.

1. It pays me. 2. I think so.—R. L. TAYLOR.

To both questions, I say decidedly, *yes.*—C. H. DIBBERN.

1. Yes, when hiving new swarms. 2. Yes.—G. M. DOOLITTLE

1. Most assuredly. 2. It is not absolutely necessary, but very desirable.—A. J. COOK.

1. If you want to feed your bees for winter, yes ; if not, no. 2. Yes.—M. MAHIN.

1. It does, if the surplus honey is wanted in the supers. 2. Yes, unless you want brood in the sections.—A. B. MASON.

1. It does with average sized colonies. If the brood-chamber is not crowded, the bees will not work in the sections. 2. It is not absolutely necessary.—J. P. H. BROWN.

1. Yes. I think that it does, in the way and manner I have often described. 2. I consider a queen-excluder a necessity in all cases.—J. E. POND.

1. With the hive I use, I do not think that it would pay me. 2. If you contract the brood-chamber to any extent, you will want an excluder.—H. D. CUTTING.

1. Only in early spring. Excessive and prolonged contraction should be carefully avoided. 2. I have never found it necessary (except in one or two abnormal cases) to use an excluder.—WILL M. BARNUM

1. I do not know. I am afraid not. 2. I have not used one, even when contracting. An excluder is needed over a new swarm, if much contracted.—C. C. MILLER.

1. You can contract and obtain more clover honey, but at the expense of a fall crop, and a dwarfed colony the final result. I do not contract. 2. Yes, most assuredly.—J. M. HAMBAUGH.

What is now meant by "contracting the brood-chamber" is accomplished by removing all the frames from the brood-chamber but 4 or 5, and filling up with division-boards, and confining the queen to the diminished apartment by means of a queen-excluder. In most localities, the plan is a mistaken hallucination, because at the close of the honey-season, the colonies are left in an impoverished condition, and must be fed up at an expense and trouble, greater in the aggregate, than the gain in surplus has been. Give me a brood-nest "contracted" with brood and honey at the commencement of the surplus flow, and I will put them for profit against anybody's bees.—G. W. DEMAREE.

1. Ask Mr. G. M. Doolittle, who first introduced to bee-keepers the method of contracting brood-chambers in producing comb honey. Ask any of our leading bee-keepers of to-day, who are making the business a success. Yes, it pays even to fuss with division-boards and dummies ; but when bee-keepers get to using a properly-constructed storifying hive, it will pay better, and the industry of bee-keeping be made a profitable one, where, by our old methods and fixtures, failure has been the rule to make the business pay. 2. Yes, but not until a storifying hive is better appreciated, will bee-keepers know how and where to use a queen-excluder to advantage in producing comb honey.—G. L. TINKER.

1. Yes, sir, it does pay, even when you have to do it by the old round-about method of taking out combs and replacing with dummies. 2. A queen-excluder is not necessary simply because you are contracting, but it has so many advantages in various ways (one of which I might mention is preventing the accident of removing the queen with the surplus honey-sections), that it always pays to use queen-excluding honey-boards at all times and in all places. No progressive bee-keeper to-day should think for a moment of producing comb honey without practicing the contraction system.—JAMES HEDDON.

1. If you want to have all the surplus honey carried into the supers, it will pay to contract the breeding apartment, to accomplish this. 2. Although it cannot be said to be absolutely necessary at any time, still it is often desirable to use a queen-excluding honey-board between the breeding apartment and the surplus-honey receptacles.—THE EDITOR.

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

CORRESPONDENCE.

QUESTIONS.

Stinging Qualities of Bees—Other Queries Answered.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

A correspondent writes : "I see it stated by quite eminent authority that the black or brown German bees, as they are variously termed, are no more liable to sting than are other varieties. Do you find this to be so ?"

In replying to this question, I would say that the answer depends very largely upon the "other varieties" with which they are compared. If they are to be compared with the Italians or the Carniolans, then all my experience goes to prove that they *are* far more liable to sting than either of these varieties. I am not afraid to venture the assertion, that any ordinary person would receive three stings in handling the black bees, to where they would received one in handling the two above-named varieties, when using the same care alike on each.

If they are to be compared with the Syrians or Cyprians, then I would say that the ordinary individual would be apt to be stung the most with the latter, yet the same behavior on the part of the apiarist would provoke one to sting, while the other would not resent such behavior at all.

When Mr. Benton wrote about the Cyprians being peaceable, he said something about their not stinging persons who walked about their hives, if my memory serves me rightly. Now should any one stand in front of a black colony of bees for ten minutes, right in their line of flight, he would be apt to be told very forcibly to get out of the way, long before the ten minutes were up ; but with the Cyprians, this seems to be no provocation to sting in the least, for they will quietly go around a person all day without a thought of stinging, and the same holds good with the Syrians.

Again, when opening a hive, the Cyprians will allow you to do this, where done with care, without smoke, but if we try the same on a black colony, they resent it by the points of many stings. On the contrary, if we use smoke with the black bees, in just the right quantities, they are brought into subjection, or even stampeded out of the hive, should any accident occur in manipulation ; while the Cyprians know no fear of smoke, unless poured on them all the while, and, should only a small accident occur, hundreds of stings would be the result, unless the apiarist was so protected that it was impossible for them to get at the person. They will crawl into the pockets or any opening in the clothing, only to sting when they come out, whether in a room rods from the hive or close to it. Hence, I should class the black bees as being about medium as to stinging.

PREVENTION OF INCREASE.

Another correspondent wishes to know if he can prevent increase by removing the old queen from a colony at or near the swarming season, and allowing them to rear another. This would be a doubtful practice, it seems to me. The only plan by way of removing the queen, which I have made a success worthy of repeating, has been to allow the bees to swarm, and, when returning them, take away the old queen. When the first young queen hatches, the bees will make calculations for more swarming, which will be announced by the piping of the queens.

I then go to the hive, open it, shake all the bees off each frame in front of the hive, and while the comb is free of bees, cut off every queen-cell I can find. In this way we are sure that no after-swarming will result, if we have taken off every cell. In doing this, we will find the cell which has hatched, by the cover being off. If we find others with the covers off, it will be best to keep watch of the hive for a day or so, for sometimes a colony swarms from having more than one queen at liberty at the same time, though as a general thing such young queens are all but one dispatched at once, or in a very few hours at least.

While this plan will work, and give a fair yield of honey, yet I believe a larger yield of a better quality of honey can be obtained where only one swarm is allowed to issue from a colony, the same being hived in a different hive from which it came.

REMOVING THE BEE-STINGS.

I am asked by still another correspondent, "What do you do when you are stung, and how do you remove the sting?"

Well, if I am stung in a place where it hurts too badly, as it sometimes does when stung at the roots of the finger-nails, I generally groan once or twice and dance about a little, when I go to work as if nothing had happened. It is a rare thing that I am stung in the face, as I always wear a veil when working with the bees, and, when in the apiary and not working at the hives, I can generally dodge any bee that tries to sting me, or get it off after it strikes and before it stings. A bee must lay hold, as it were, to sting, and an experienced person will know the second a bee alights on him whether it intends to sting or not, by this laying-hold feeling. Many persons strike at or kill a bee that has merely dropped on the hands or face to rest.

Now, about removing the sting: Some recommend using the thumb-nail, a pair of tweezers or the blade of a knife. I use none of these, as they are all too slow. Two-thirds of all the stings which I get are removed before the lance strikes deep enough to cause any pain, and this "laying-hold" feeling enables me to do this. As soon as I feel this, I know that I am to be stung, and at that instant, an instinct comes over me which causes me to rub the place where the bee is against my clothing, thus crushing the bee, and, if the sting has been thrust, removing it at the same time.

If the bee is on my hand, it goes down against my clothing at my hips or near the knee, whichever will reach the position the bee-occupies; if on the face or neck, then the sleeve on the fore-arm goes to the place and rubs bee and stinger off. In this way, one-half or more of the bees which intend to sting me are killed before they have had time to push their lance into the skin. Since I have learned these things, I do not receive one sting that affects me any, to where I had 20 formerly. Try it, reader, and see how easily it is done.

Borodino, N. Y.

BEE-SPACES.

Many-Banded Bees—The Spacing of Combs, etc.

Written for the American Bee Journal

BY REV. W. P. FAYLOR.

On page 365, Dr. C. C. Miller has some things to say about my communication on page 313. His review is partly a eulogy, and partly a criticism. Though he did not reconize my standing, I will not refrain from calling him "Doctor." He admits that there was something in my article, when he says: "I have been much interested in reading the article."

That "the black bee is rapidly giving away to the 4 and 5 banded Italian," the Doctor hardly thinks is correct. I would like to know why it is that our best breeders cannot keep up with their orders in sending out queens. Is it not because their bees are gentle and handsome?

The editor of the *Bee-Hive*, in his last issue, says: "It is a fact that beauty in bees over-balances all other qualities with the majority of bee-keepers. Send out handsome bees, and customers are always satisfied." That tells it exactly. But if Dr. Miller does not wish to advance his bees in point of color, I will not quarrel with him about that. The prettier I can get mine, the more pleasing to me.

SPACING THE BROOD-COMBS.

About the proper distance to space combs, the Doctor admits that I may be right; but when he says, "Even if we should find 1½ inches the rule, the advocates of closer spacing might say that bees left to themselves will use a spacing that will allow the building of drone-comb," the Doctor is shifting. The fact is, that when the swarming-time comes, the bees will have drones, close spacing, wide spacing, or no spacing at all, even if they are compelled to tear down one comb to make room for another.

If the reader wishes to know whether the bees build brace-combs more readily where combs are closely spaced, all that is necessary to do is to go to a hive of full workers; take two combs and place them so as to nearly touch each other. In 48 hours notice the result. Do this when the bees are storing honey.

NUMBER OF CELLS TO THE INCH.

Dr. Miller says: "Mr. Faylor is a very brave man to intimate that bees, of their own accord, build worker-cells larger than 5 to the inch;" then adds: "Are all the books and observers of the last hundred years in error on this point?" Yet in the same reply he continues: "Bees do not build combs exactly 5 cells to the inch, but *about* (notice how accurate) four and four-fifths inches. Now, I ask the reader, what can you think of such reasoning as this? Prof. Cook says: "The diameter of the worker-cells averages little more than one-fifth of an inch." (See his Manual, page 105.*) It might not be amiss for me to say that if Dr. Miller's book gives 5 cells to the inch, he should have it revised.

Yes, sir, I am "fully posted" on Mr. A. I. Root's position on this; and I think that his latest foundation machines make the cells as much too small as some of the old ones made the cells too large. I should like to know who, besides Mr. Root, as a foundation-machine builder, advocates 5 cells to the inch.

I enclose samples of foundation for the Editor, made on the Vandervort and Pelham mills. The Vandervort machine makes 4½ cells to the inch, horizontally, and 5 cells diagonally, which would average 4¾ cells to the inch. The Pelham machine makes four and three-fifths cells to the inch, and averages nicely each way. To my mind this machine makes the best foundation, with very high side-walls, and yet has a thin base for the bottom of the cell.

Certainly Dr. Miller was wasting words when he said, "If Mr. Faylor does not want to lose reputation as a careful observer, he will do well to make some critical measurements, and send to the Editor." Why, can't any bee-man get samples of foundation and natural comb—and ascertain for himself whether I am correct? And as for reputation, I am not seeking after that; the reader can think that I am joking or telling the truth, as far as I am concerned; but I am settled on these points—worker-cells to be 4¾ to 4½ to the inch; combs spaced 1½ inches from center to center; and the handsomer and gentler the bees, is my choice.

St. Bernice, Ind.

[The samples of comb foundation accompanying the foregoing article measure just as stated. Dr. Miller surprised himself by taking some measurements, as was shown by the postscript to his article on page 365. We fully agree with the Rev. W. P. Faylor on all the points for which he contends in the foregoing article, and upon second thought we believe that Dr. Miller will do the same.

*This quotation is from page 105 of the edition published in 1884.—Ed.]

BEE-TALK.

The Keeping of Bees and their Improvement.

Written for the American Bee Journal

BY J. W. TEFFT.

The breeding of honey-bees has become a scientific study, and all over the world men of intelligence and wealth are enlisting in the ranks with rapid succession. That it is an honorable business, no one will deny, for even clergymen are now engaged in endeavoring to raise the standard of the honey-bee family—the noblest of the insect kingdom. What bee-keeper is there who does not delight in handling his bees these delightful June days? It makes a man like himself and his family better, while the whole world looks brighter, and daily toil becomes easier. The wheels of thought are oiled with magnetism and animation, after a lively time with the bees, and perhaps a brash with a little "cyclone" of cross bees.

"How do you account for the increased interest in breeding fine bees?" queried Mr. Albert Daken, of Tully, N. Y., during a pleasant visit which we had recently. I replied, first of all, that it is attributable to the trials of Italian bees throughout the country; they startled the world by being great gatherers of honey, and many people think that their good qualities and record can never be excelled. They are wonderful bees; their wonderful performances set the breeders to thinking, and the one great object was to bring out a bee to dethrone them as the honey-bees! Breeders brought forward the Holy Land bee, the Palestine, Cyprian, Carniolan, Egyptian, Caucasian, and, lastly, the "invincible" bee, being a cross of the black and Caucasian.

Breeders of bees all over the country have been trying to out-do one another for the past 25 years, or since the grand circuit of the International American Bee-Association was inaugurated; and there is no telling what the ultimate result may be.

Another question propounded was this: "You recently purchased a few colonies of thoroughbred bees in Tennessee, to mate with your Caucasians. Now, why would it not have been just as wise to have sent some of your queens to be mated with some of the great honey-gathering bees?"

I maintain that the drone controls the action of the offspring more than the queen, bebause he is the stronger. This is true also in the human family, in nine cases out of ten. Again, drones cannot be shipped alive any great distance.

"Would you as a breeder of quite long experience, advise a young man with limited means to buy thoroughbred Italians, to mate with thoroughbred Syrians, in hopes of rearing a new type of bees, in preference to buying an equally good honey-gathering bee?"

No, sir. A man with limited means cannot afford to experiment. It is different in the case of Senator Doolittle and myself, and perhaps others. If I fail to get good results from my thoroughbred Caucasian drones from the first cross, I can cross them again, and get the honey-gathering instinct sufficient to overcome the thoroughbred desire to swarm. Thoroughbred blood, as all know, gives finish and hardy-staying qualities. I have been careful in my selection of Caucasian queens, to secure daughters of thoroughbreds that possessed as much honey-gathering action as possible, so that it would be necessary to make but one cross. Whether I will succeed or not, time will tell.

"You maintain that the drone controls the blood, finish and action in the honey-bee as well as in the human family. Will you please explain how you formed that idea?

From personal observations I can distinguish an Italian from a Cyprian, in ninety cases out of a hundred, by their actions. The gait and action is inherited generation after generation. There are but few exceptions even in great grand-sons or great grand-daughters.

"Then you do not regard a fine-blooded Caucasian queen of so much importance as a fine-blooded drone for breeding?"

Understand me—it is the intermingling of royal blood that produces royal results. I want the best of both that money can buy, and the outcome must be gratifying, as a rule. Life is too short to experiment to any great extent; but if we do not get out of the rut and experiment a little now and then, we will never have anything new.

"Do you maintain that the surplus chamber of a hive should be of the same depth as the brood-chamber?"

Yes, most assuredly. But why mention this subject now? You know that every useful invention has been carried out and perfected by the co-operation of many minds, or by the successive application of varied geniuses to the same object, age after age. The mechanic and editor must aid the bee-keeper, or he must stand still in his inventions or demonstrations; and the inventor and editor must aid the mechanic, or he will work without wisdom and with intolerant stupidity. Altogether, they solve intricate, masterly problems.

SPACING COMBS.

The Close Spacing of Brood-Frames in Hives.

Written for the American Bee Journal

BY J. E. POND.

Some years ago, when I gave the result of my experiments in close spacing of frames (and, by the way, those articles of mine were the first ever written on the point), I said, "I believe the principle would in time be adopted, and would work a revolution in bee-management."

I still believe, as I then stated, for while my ideas were then rather laughed at, as being impracticable, now they are being commented upon, as perhaps being of some little value. All I asked then was a trial; and I say now that I firmly believe that whoever gives the method a fair and honest trial, will become convinced that it will accomplish all I ever claimed for it, and more than can be accomplished by any other method, whether used for comb or extracted honey; as a means of controlling swarming, or increasing the size of colonies when desired, of rearing and pure mating of queens, of preventing formation of brace-combs, etc. "Pooh!" every one will say, "he claims the earth." For reply, I say simply, "Try it, and be convinced."

Is the plan rational and in line with nature? I have always been led to believe that man was given brains to use, and, in bee-keeping, the best use he can make of them is to aid his pets where he can. "Father Langstroth" started the "ball a-rolling" with his frame; and now we can control and aid also.

In nature, the bees space their combs widely, for the reason that it gives them ample space for winter supplies. We do not need this space, for we can do what the bees cannot, namely, give all the space wanted, and just where it is needed. Now what we want is to use the brood-chamber for brood, and we do not need any winter supplies to be stored therein. By close spacing, we can accomplish just this, if we wish. It is not guess-work with myself—I have tried and proved it, season after season; and what I have done, any one can do also.

But "brevity is the soul of wit," and I need not enlarge on the point, as I have already said enough to, as I desire, start a discussion that will bring the matter to the attention of all experimenting apiarists. Who will give the method a thorough test, and a fair report of results?

North Attleboro, Mass., May 31, 1890.

THE CLOVERS.

Alsike and Its Origin—Honey from Clovers.

Written for the American Bee Journal

BY C. J. ROBINSON.

In reading the correspondence of bee-keepers, I observe that some have mentioned that differently named clovers afforded honey, and that it may be to advantage to cultivate certain species or variety of them.

The Alsike—so-called—has been tried by many, but the reports are conflicting. Its botanical name was so given from its being supposed by Linnæus to be a hybrid between white and red clover, but it is now known to be a distinct species. It is found native over a large part of Europe, and was first cultivated in Sweden, deriving its common name from the village of Syke in that country. In 1834, it was taken to England, and in 1854 it was taken to Germany, where it is largely grown, not only for its excellent forage, but also for its seed, which commands a high price.

In France, it is little grown as yet, and is frequently confounded with the less productive *Trifolium elegans*. In the official report of the World's Fair held at London in 1851 (if I remember correctly), mention is made of Alsike clover seed, which was exhibited in the department alloted the Swedes.

In 1853 or 1854, I received, among an invoice of seeds, a small paper of Alsike clover seed, sent to me from the now Department of Agriculture by our Member of Congress. I sowed it on rather dry land, and did not get a favorable opinion of it.

In 1870 I procured a few pounds of Alsike seed, and put it upon dry land, my object being to test it as a bee-forage plant. I was not highly enough pleased with Alsike to make further trial. I sowed timothy seed with the Alsike; the latter failed to grow much of a crop the second season. Alsike seed is possessed of lasting vitality. The reason for Linnæus supposing Alsike to be a hybrid, was because it is intermediate in size and color between white and red clover.

In "Les Prairies Artificielles," by Ed. Vianne, of Paris, we find the following (condensed here):

> Alsike does not attain its full development under 2 or 3 years, and should therefore be mixed with some other plant for permanent meadows. It is best adapted to cool, damp calcareous soils, and gives good results upon reclaimed marshes. It is adapted neither to very dry soils nor to those where there is stagnant water. Being of slender growth, rye or oats are often sown with it, when it is to be mowed. In fertile ground, weeds are apt to diminish the yield after a few years, so that it requires to be broken up. It is generally sown in May, at the rate of 6 to 7 pounds of the clean seed per acre. Alsike sprouts but little after cutting, and therefore produces but one crop and one pasturage. The yield of seed is usually 130 to 170 pounds per acre.
>
> It does not endure drouth as well as the common red clover, but it will grow on more damp and heavy soils, and it is said that it can be grown on land which, through long cultivation of the common clover, has become "clover sick."

Other vareties or species of clover secrete honey, but bees are not able to reach the nectar at the bottom of the tubes of the flowers. Bees have certain parts of the mouth—the *maxillæ* and *labium*, or lower jaws and lower lip, with their feelers (*palpi*)—elongated into a sort of proboscis; and the *ligula* is elongated, assuming the form of a filament capable of extension and retraction, and is folded up when not in use.

This is the organ called, by some, the tongue of bees, although the name cannot be regarded as very appropriate, it being a part of the *labium* or lower lip. The other elongated parts of the mouth serve as a sort of sheath for this organ, when it is folded up.

It is not tubular, and employed in the manner of suction, as has been supposed by many, but is more or less hairy, so that the honey adheres to it as it is rolled and moved about, and is conveyed up through the mouth into the honey-bag, sometimes called the first stomach, an appropriate receptacle, in which it apparently undergoes some change—without, however, being subjected to any process analogous to digestion, and is ready to be given forth again by the mouth.

I do not (please note) disagree with Prof. Cook in his remarks calling honey "digested nectar," but I do assert that honey is different from nectar in its natural state or when gathered; and the change is produced by passing through certain organs of the honey-bee, and the term "digestion" expresses the action correctly enough.

The idea that bees can be or have been bred into a "strain" that, different from other bees, gather nectar from red clover, is ridiculous. When it occurs that red clover secretes nectar so that the flower-tubes are nearly filled, the bees will work on the clover so long as they can reach the sweet in the tubes; so bear in mind, it is the kind of weather—not the kind of bees—that produces honey from big clover.

There is, in this country, red clovers known by different botanical names. The French clover (*Trifolium incarnatum*); also mammoth clover (*Trifolium medium*), which is cultivated under the name of sapling, or pea-vine clover, etc. These clovers are usually regarded as being the above mentioned species, but are, perhaps, a variety, or varieties, of the common red clover—*Trifolium pratense*.

Richford, N. Y.

THE BEE-SPACE.

The Correct Space—Experience with the Bee-Escape.

Written for the American Bee Journal

BY WM. L. DREW.

To query 709, regarding the size of the correct bee-space, Mr. Secor answers three-sixteenths of an inch, and the Dadants a scant one-fourth inch, which is about the same. In the June *Apiculturist*, an article in the *Review* is mentioned, recommending this same space—three-sixteenths of an inch—and Mr. Alley seems to sanction it. Now all this talk seems very strange to me, and I will proceed to tell why.

I have in my possession, and have had in use for several years, some 15 Heddon honey-boards which were intended to be queen-excluding by placing the slats just three-sixteenths of an inch apart. The slats are but five-eighths of an inch wide, so as to reduce the variance of this space caused by lhe swelling or shrinking of the wood. The boards are exceedingly well made, and the slats are very accurately spaced. As queen-excluders, they are commonly successful, but these boards are now thrown aside. Why? Because the bees *will* persist in almost absolutely filling the space between the slats with what seems to be a mixture of glue and wax. This is usually arranged in a rough attempt at vertical cells, running through the spaces, and closed like the base of a cell either at the top or bottom, or somewhere in the middle of this space.

I have also regular Heddon honey-boards with slits spaced three-eighths of an inch apart, which have been in use the same length of time as the others, and the spaces are comparatively free of all stoppage. There is some comb in these spaces, but never any glue.

Now the question arises, if bees will solidly fill a three-sixteenths-inch space between the slats of a honey-board, why will they not—and will they not—do the same thing in the same space above the brood-frames or between section-cases?

BEE-ESCAPES—UNCAPPING.

Will some one who has had in practical use the Reese bee-escape, please tell us if the bees ever trouble in uncapping comb honey in sections when the escapes are put on. We do not want any theory on the subject—we want *experience*. We are pretty safe in presuming that the Reese and the Dibbern bee-escapes will work alike in this regard, but the Reese escape has been in use a short time, and the Dibbern never has.

Newton, Iowa.

WINTERING.

Suggestions Regarding Bees in the Cellar in Winter.

Read at the Ohio State Convention

BY F. A. EATON.

I will try to give a few of the points of advantage in cellar-wintering. In the first place, it gives one in this northerly latitude, the privilege of using the most convenient and handy of all hives, the single-walled Langstroth; best for summer and spring, because the rays of the sun penetrate and warm it the most quickly. Then, it is far the most convenient for all manipulations by the apiarist, compared to the large, double-walled hive.

The cellar is the only safe way known for wintering bees in any single-walled hive. The bee-keeper who makes a specialty of bees, or one whose bees are his main hope of support, if he is a man who has any care or solicitude for the queen and the little workers, he does not want any guess-work about his bees coming through the winter, for he may grow gray from worry in one short winter.

Bees should be prepared for the cellar in September, by seeing that all colonies light in stores have a plenty. Feed them up to 25 or 30 pounds; and one of the best ways to feed at this time in the fall, to prevent robbing, is by removing empty frames and supplying frames of sealed honey. I find that natural stores are the safer for wintering in-doors, provided that the proper conditions are acquired in the cellar. Your cellar should be an under-ground one, as an up-ground repository is entirely too sensitive to the changes of the weather.

A good, dry, under-ground cellar can be kept very near the desired temperature all winter. The bee-cellar must be strictly a *bee-cellar*—not a cellar for general purposes, filled with vegetables and what not, subject to disturbance by too frequent visits. It should be a perfect dungeon; there should not be the slightest ray of light, or the bees in their warm and normal condition will fly to it and never get back to their hives. I had a farmer neighbor living a few miles away, who came to me last spring and asked, "How does it come that my bees die in the cellar?" I heard that he wintered them that way, and supposed it was the best. He never read a bee-paper. I asked him what kind of a cellar he had for bees; he replied, "O, I have a good one; taters and apples never freeze in it, and then I give them plenty of light so they could find their hives."

To start a tier of hives, place two 2x4 scantling on the floor of the cellar, just far enough apart to set a hive on, and far enough from the wall to admit a person between the wall and the hives. Now place two more scantling in the same way, about 6 inches from the first two; this gives room for reaching in between the two tiers to place the blocks under the hives.

It is now ready for the hives to be carried in. To winter successfully in the cellar, the hives must have loose bottom-boards, and they are in the best condition when the top is hermetically sealed by the bees.

Upward ventilation is very injurious, and is liable to cause bee-diarrhea; but if it did not cause that disease, it would be ruinous to the bees toward spring when they begin to breed. They could not raise the temperature inside the hive above that of the outside, as there would be a constant circulation of the air to carry off the heat.

Select a cool day, when the mercury is a little below freezing, and, if possible, an experienced person, or at least one that is not nervous, to help carry them in. They should be carried with great care, so as to cause as little disturbance as possible.

Remove the roof of the hive in the yard, as it would take up unnecessary room in the cellar. Have a basket of sawdust with you to close up the entrance of the hive with, while you are carrying them in. Build up the two tiers on the four scantlings prepared as you go along, placing the backs of the hives in the two tiers together, and build them up as high as the cellar will admit. You should have a lot of oblong blocks one inch square prepared ahead.

As fast as a hive is put in its place, raise it from the bottom-board, and place one of these blocks under each corner. This raises the hive one inch from the bottom all around, and gives all the ventilation necessary, which is a good circulation of air under the frames. It also prevents molding. With this under ventilation only, there is no sweating, or condensing of moisture, which is so injurious and hard to prevent out-of-doors. Who has not seen the water trickle from the entrance of out-door hives on a cold day, and freeze in icicles, or close up the entrance entirely? By this raising of the hive from the bottom-board, it gives plenty of room for dead bees to drop, and not clog up the entrance.

The cellar needs but little, if any, ventilation—the only ventilation I give is to open the door after dark, two or three times a week, and leaving it open a few hours until the air is changed, and the mercury gone down a couple of degrees. The proper degree at which to keep the cellar is no longer an experiment, as it has been well established by many to be near 45°.

Cellar-wintering is the only plan which places bee-keeping on a solid basis with other business. Who, in other business, would invest money in anything that would be likly to lose the entire principal, or nearly so, every year, nine times out of ten, as it is with out-door wintering? True, there are a few experts like Mr. A. I. Root, who can winter bees out-of-doors successfully, but there are many who cannot. Therein lies a secret, why so many beginners fail. They start with but few bees, which is proper, the fewer the better—not enough to pay for fixing up a cellar to winter in, thinking that they will do so when they reach their *fifties*, but, alas, they never reach the desired goal. Winter after winter they lose most of their bees, until they at last give up in disgust.

The saving of expense is a matter to be looked after in wintering. Bees should be placed in the cellar early in November, and left in until nearly April 10, of course varying slightly with the season. During this time they will only consume from 5 to 10 pounds of honey per colony, coming out with plenty of young bees hatched, and from 3 to 7 frames of nice brood; while bees out-of-doors will consume in a corresponding length of time from 20 to 30 pounds of stores, and be just fairly started to breed. Compute the difference of honey used, at the small sum of 10 cents per pound, and you have at least $2.00 per colony—an item on an apiary of 100 colonies, of the sum of $200. Is this not worth looking after?

Another expense is that of hives. For wintering out-of-doors with any degree of success, a chaff hive must be used, costing from $2.50 to $3.00 more than a good single-walled Langstroth hive, requiring on 100 colonies an investment of from $250 to $300, which is no trifling item. Does some one say, "a cellar costs something also?" True, an under-ground cellar large enough to accommodate 100 colonies would cost nearly $100—which still leaves a nice balance.

Bluffton, Ohio.

PRIZE ESSAY.

Extracted Honey—Its Great Value as an Article of Food.

Written for the American Bee Journal
BY A. N. CLARK.

The knottiest problem with which the producer of extracted honey has to contend, is to establish and maintain a reliable honey market. The only possible way to solve this problem is for *all* bee-masters to handle none but a fine article. Confidence once thoroughly established, the custom of consuming Nature's sweet will be almost sure to follow.

To obtain the best quality, extract from clean combs, from the supers, and not from the brood-chamber. If possible, avoid extracting from combs containing pollen in the bottom of the cells, as such pollen-charged honey has a disagreeable flavor. Keep the combs clean at all times of the year. See that the extractor and all other metal receptacles are free from soluble rust. In short, the utmost cleanliness is required from the time the combs are removed from the hives, until the honey is in the hands of the consumer.

RIPENING AND STORING HONEY.

As regards ripening, basswood honey may be extracted before the cells are completely capped, if immediately placed in a hot, airy room. By this method of evaporation, it loses some of its strong, and, to many, disagreeable flavor. But white clover, which is deficient in flavoring-matter at its best, should not be removed from the hive until thoroughly ripened; and unless the apiarist has the best of facilities for evaporating honey, he had better leave all honey, even basswood, to be ripened in the hive.

Annually, the quality of hundreds of tons of honey is ruined by improper storage. If a dry, warm room cannot be obtained, it should, on the day it is extracted, be placed in barrels or cans and sealed air-tight.

In using barrels, avoid whisky barrels, as they are usually charred inside, and the crystallized honey cannot be removed without disturbing particles of charcoal. Pine barrels or pails are objectionable unless waxed, as they impart a piney flavor. New oak-staves are subject to a similar objection; but when these barrels have once contained alcohol, they no longer impart a woody flavor to honey. Alcohol being a powerful solvent, it has dissolved out of the staves the free tannic acid, leaving the barrel in the best possible condition for a honey-receptacle.

In most localities, the best receptacles for home trade, are those of tin, well labeled, holding from one to twelve pounds. When put in glass, the honey should be heated and sealed while hot, thus preserving the liquid form longer than when put up cold. With glass vessels, *small* labels should be used, as clear, bright, liquid honey is more attractive than any printed label.

THE USE OF CRYSTALLIZED HONEY.

The apiarist should encourage the use of crystallized honey for two reasons: First, it is more convenient to handle; second, it proves its freedom from commercial glucose—the only adulterant that could possibly be used at present prices.

Yet, in spite of the fact that honey sells for less than sugar, if an apiarist uses sugar for winter stores, it will hurt his home market, no matter who he is, or who his customers are. Not only must the apiarist be honest in everything, but in many cases he must be more than honest.

With the wintering, swarming and crop failure problems to contend, to produce large crops, the apiarist needs to be a philosopher; but to readily dispose of large crops he needs to be an angel. (The present indications are that there are more philosophers than angels.)

Producers of extracted honey should in various ways call attention to the many uses of honey, its wholesomeness and cleanliness as compared with sugars, molasses, and syrups, and its economy as compared with comb honey.

It is a fact beyond dispute, that owing to the nastiness and greediness of those who handle the products of sugar-cane and glucose, that molasses, syrups and dark sugars are almost unfit for human food.

As the mineral poisons, chloride and muriate of tin, are sometimes found in white sugars; and as commercial glucose or grape sugar nearly always contains free sulphuric acid and lime, the only remaining wholesome sweets are honey and sorghum. Of course, the sugars contained in fruits are wholesome, but are not produced on a commercial scale.

While cane-sugar has greater sweetening power than honey, the latter has the advantage of being more easily assimilated by the digestive organs. In fact, honey is so natural a food for man, that good physiologists tell us that it is already digested for us, and all we have to do is to eat and assimilate. Cane sugar, on the contrary, must be converted to grape-sugar before assimilation takes place.

To substantiate what I have said regarding the comparative value of honey as a pure, clean sweet, I would say that Dr. Kedzie—our able and honorable State Chemist—at a meeting of the Michigan State Board of Health on Jan. 14, 1879, said that, as a general thing, sugars in Michigan were adulterated; that poisonous materials were used to color sugars, and that coffee sugars almost always contained lead salts.

Dr. T. D. Williams, of Chicago, stated that he has found sugar products almost invariably contaminated with lead.

As regards the use of sulphuric acid, the State Assayer of Massachusetts, says that he found as high as thirty grains of sulphuric acid to the pound of sugar.

Dr. Kedzie found in one sample of syrup, 141 grains of sulphuric acid, and 724 grains of lime to the gallon; and in another, which had caused serious sickness in a whole family, 72 grains of sulphuric acid, 28 grains of copperas, and 363 grains of lime to the gallon. If any one doubts the poisonous qualities of the above chemicals, let him administer a dose to a rat or worthless dog, and watch the effect.

Sugar manufacturers do not use poisonous chemicals because they wish to injure the health of the consumer, but because it pays them to do so; to completely neutralize the poisons they use in process of manufacture would add to the expense of the product, and such a course would require more time and more skilled labor.

It is well for all to remember that honey is solely the product of Nature, and that Nature is more honest and less niggardly than our sugar-manufacturers. Nature has no motive for cheapening the cost of her products at the expense of quality. Every chemist knows that sugar-makers have just such motives, and such practices are more injurious to the health than sugar trusts are to the pocket-book of the consumer.

The late Dr. J. G. Holland, in treating on the subject of longevity, said: "By all authorities, honey has been esteemed the 'juice of life,' and carries far more merit than the fabled fountain of youth and beauty which Ponce de Leon sought in vain. Many aged philosophers, and among them Democritus, Pythagoras, and Pliny trace their length of days to the use of honey. Two persons in modern times are mentioned as having lived to the ages of 108 and 116, and who, during the last half century of their lives, for their breakfast took only a little tea sweetened with honey."

While I do not advocate discontinuation of the use of sugars for cooking and baking purposes, I think that under nearly all circumstances honey can be very profitably substituted for syrups and molasses, and in many cases it should be used where sugar is now used. Although the first cost of a gallon of honey is greater than that of a gallon of poor molasses, I think that in the long run the honey is the cheaper.

Few people take into account the number of hours of labor and pleasure they lose in the course of a life-time, consequent on their having partaken of unwholesome food; and again, the writer cannot too strongly urge honey-producers to handle nothing but a clean, well-ripened article of extracted honey.

East Le Roy, Mich.

SWARM-CATCHERS.

How to Make and Use them in Securing Swarms.

Written for the American Bee Journal

BY ROBERT CARVER.

Having read in the BEE JOURNAL the various articles under the head of "Swarm-Hivers," "Swarming-Baskets," etc., and failing to see anything that describes the kind of swarm-catcher which I use, I write:

My swarm-catcher is simply a tapering box, made of light material 4 feet and 10 inches long, and 14 inches wide by 19 inches high at the large end, and 10 inches wide by 4 inches high at the small end. The small end is so made that it will fit over the entrance to a hive. A wire-screen door fills the large end; the top and sides are mostly covered with wire-screen; the bottom is covered with thin boards, and is furnished with handles so that it can be quickly adjusted to a hive. I have 20 of these swarm-catchers, which, in swarming-time, I have scattered about the yard so that they will be convenient of access to any hive in the yard.

Now as to its operation: From 7 o'clock in the morning until 4 in the afternoon, watch for swarms; when a swarm starts out a catcher is quickly adjusted to the hive—the bees have no other way only to go into the catcher.

When the bees have done issuing from the hive, the catcher is taken away, closing the end so that the bees cannot get out. I then mark the number of the hive on the catcher, and carry it to some convenient place outside of the yard; the bees will soon cluster in the catcher, and can be put into a hive when convenient to do so, which should be within a couple of hours after swarming; but in case I am driven with swarming, I sometimes leave them until nearly night before hiving them.

In transferring the bees from the catcher to the hive, spread a sheet on the ground, place the hive on the sheet (so that any scattering bees can be shaken up to the hive), and take out the screen door from the large end of the catcher. Now take a few bees from the cluster, and place them at the entrance of the hive; as soon as a few bees get started in, they will give the signal of entering, which all the bees in the catcher will understand; then place them down in front of the hive as fast as they can pass in. The queen will usually find her way in with the rest of the bees without looking after.

Twenty swarm-catchers is sufficient for 150 colonies of bees. All that is required then, is a sharp watch for swarms, and all will be well.

Manton, Mich.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM
OUR LETTER BOX

Death of a Lady Bee-Keeper, etc.

Miss A. B. Stone, for a number of years a subscriber for the AMERICAN BEE JOURNAL, died on May 13, 1890, from the effects of *La Grippe.*

The weather has been cold and dry all the spring until the middle of May; since then it has been warm and rainy. Every thing looks favorable for a good honey season, and the bees are in good condition for the harvest. They are at work on pin-cherry and wild peas. I had my first swarm to-day. WILBER STONE.

Fall Creek, Wis., June 2, 1890.

Bees Doing Splendidly.

My first swarm came out on May 27, and the bees are doing splendidly now on dandelions and wild cherries. I had 14 colonies left out of 77. I have bought some bees, so I will commence with 31 colonies. Over half of the bees failed to winter in this county. I shall increase my apiary as much as I can this season.

FAYETTE LEE.

Cokato, Minn., June 3, 1890.

Good Prospect for White Clover.

I have 25 colonies in fair condition, but a number would have starved ten days ago, if I had not fed them. They are not as strong now as they were one month ago, but they are doing well on blackberry and raspberry. The prospect for white clover is good—it is beginning to blossom. I am greatly indebted to the AMERICAN BEE JOURNAL for what I know about bee-keeping. A. M. LAUGHLIN.

Normal, Ills., May 31, 1890.

Large Colonies of Bees.

I have at the present time many powerful colonies of bees, as the result of the new system of management. One of the best at this time occupies 40 brood-combs, with about 25 of brood. The number of bees is something extraordinary, and it is safe to say that it is the largest colony in the State of Ohio. All who have seen it, pronounce it the largest, and the strongest working colony of bees they ever saw. The queen is a Syrio-Albino, one year old, and although the queens of this strain of bees are highly prolific, it is not all in the queen. The colony has not been fed, and has had no care except as advised in my new book.

We have also had a very unfavorable spring for breeding up, and many colonies about here have starved outright—one man losing 14 colonies in May. The fruit-bloom was scanty, and seemed to have no nectar. The weather has been cool, and we have had an unprecedented fall of rain.

I think that the large colonies are due to the form of the hive used, and the care given, and not to any system of feeding, as my largest colonies were not fed. I have also demonstrated, I think, that as large colonies can be bred on frames 7x17 inches, as on any larger size of frames.

G. L. Tinker, M.D.

New Philadelphia, O., June 4, 1890.

Basswood Stripped of Leaves.

The basswood is stripped of its leaves, the worm having just gotten under good headway on it. I would like to hear from other bee-keepers in regard to the basswood. Will it leave out again and bloom? My first swarm came out on May 23. Who can beat that in Blue Earth County, Minn.? I had 8 swarms in May, and have 51 colonies at present. C. A. Goodell.

Mankato, Minn., June 5, 1890.

Expects a Large Crop.

My bees never wintered better than they did the past winter. I put them into the cellar on Oct. 30, and took them out on April 12 and 14, all having wintered well but one colony that died. When I put them into the cellar there were 2 or 3 colonies or queens in one hive, and the next day I found a queen dead at the entrance of the hive. White clover looks fine, and I think that we will have a big crop.

C. D. Barber.

Stockton, N. Y., May 31, 1890.

Colonies Slow in Swarming.

Bees are not doing so well this year, due to the cool weather we had in April and the first part of May; also owing to rain during the blossoming of the small fruit. The bees have so far gathered very little honey; some colonies have, after clustering out, destroyed queen-cells, and did not swarm. One party keeping about 30 colonies has had 10 swarms up to date, and this is the best done in this part of the county. Some with 30 to 40 colonies have not had a swarm yet this spring. We are in hopes that it will be better in one to two weeks, as the white clover is beginning to bloom, also blackberries, etc. Wm. Moershel.

Homestead, Iowa. June 1, 1890.

Wintered Well.

Bees wintered well, though the consumption of stores was the largest ever known; fortunately, they also had the largest supply I ever knew. The spring has been backward, and the weather bad for bees. White clover is beginning to bloom, and the prospect is good for a fair crop of clover honey. I had 2 colonies of bees to desert their hives, leaving both honey and brood. There were enough bees to have made good colonies—in fact, many more than some that are now strong and are storing honey. With one or two more showers, we are likely to have more swarms than we want, though more are expected in ten days.

S. N. Black.

Clayton, Ills., May 30, 1890.

Nectar Scarce—Wet Weather.

I wintered 21 colonies on the summer stands, and all came out strong. They killed their drones after fruit-blossoms. Nectar is scarce at present, as it is wet all the time. Corn planting is unfinished, and late. Bees are in good condition for basswood and clover. Some swarms have issued for my neighbors; I tried to keep mine back, as I did not want to feed them. I have not had a swarm to abscond in ten years. P. Sheridan.

Perrinton, Mich., June 4, 1890.

Still Feeding the Bees.

Bees are starving, yet I have lost none. I had a swarm on May 20. I am feeding the bees yet. Some have lost ⅔, some ½, and so on. T. C. Kelly.

Slippery Rock, Pa., June 2, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, June 5.—There is no comb honey on the market, but a small stock of basswood extracted and California; new Southern extracted is arriving, but the quality is mostly inferior. We quote: Extracted basswood and California, 7c; Southern, 65@70c per gallon. Beeswax, scarce at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 5.—The receipts of the old crop of comb honey have been quite liberal the last two weeks. Demand lighter, dealers only buying one case at a time. We quote: White 1-lbs., 13@14c; dark 1-lbs., 10@12c. Extracted, very slow sale; white, 5@6c; dark, 5c. No beeswax in the market.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, June 5.—Demand is now very light for comb honey, and will be for the ensuing two months. There is not much on the market, and very little of it is in desirable shape for the retail trade, being in supers and just as removed from the hive. Best brings 13@14c, and off-grades about 10c. Extracted, 6@8c. Beeswax, yellow, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

KANSAS CITY, May 2.—The honey market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.: dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good. Waiting for the new crop.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, May 5.—One-pound sections, 14@16c; extracted, 7@9c. Demand good and supply likely to be exhausted before the new crop comes in. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, June 3.—Best white comb honey, 13@14c; other grades, 10@13c. Extracted, slow demand at 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, May 1.—Demand is slow for comb honey at 10@14c. No choice white on the market. Extracted is in good demand at 5@8c. Stock is low.

Beeswax is in good demand at 22@26c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
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☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

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☞ We offer the Monthly Philadelphia *Farm Journal*, and either the American Bee Journal or Illustrated Home Journal for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

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The American Bee Journal	$1 00	
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Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
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CATARRH.

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A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

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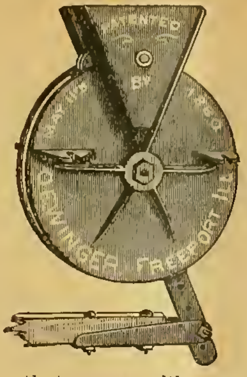

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Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

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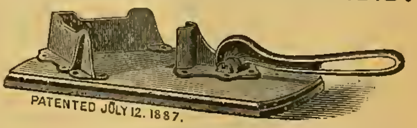

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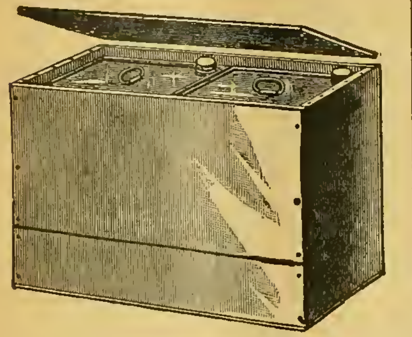

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The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.

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We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

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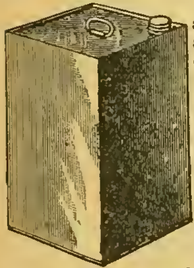
1 Single Can .... (boxed)	....	$ .45
12 " Cans ...	"	5.00
100 " " ...	"	40.00
1 box of two Cans	....	.75
12 boxes "	....	8.40
100 " "	....	65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.



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22Etf

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Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

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Carniolan Bees!

Pleasantest Bees in the World.
Hardiest to Winter.
Best Honey-Gatherers.

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We offer to any one who will send us $1.25, a copy of our paper and a nice Carniolan Queen. The Queen alone is worth $2.00. Address,

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THE **Common-Sense Honey-Extractor** is strictly scientific, powerful, durable, handy, clean and rapid, and differs from all others, and is cheaper than the cheapest at slaughter prices. CIRCULARS FREE.

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Our 1890 16-page Circular of Bee-Keepers' Supplies. Send name on a Postal Card. Address,
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AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

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In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

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PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

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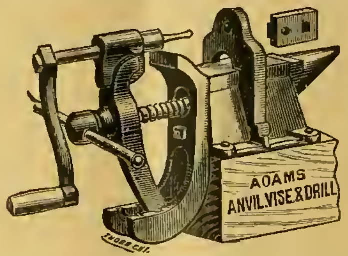

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The Drill Attachment can be put on or taken off instantly. Farmers especially will find it of great convenience to be able to drill a hole through a piece of Iron without making a trip to town. The Anvil and Vise combine strength and durability, the whole making one of the most complete and useful tools. Width of Jaw, 1¾ inches.

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The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Samples, 5c., and money returned if they are not extra nice. Untested Queens, $1.00; six for $5.00. Tested (at least 3 bands), $2.00; Selected, tested (4 bands) $3; Breeding Queens (4 to 5 bands), $6.00. Virgin Queens, 50 cents; 5 for $2.00. Safe arrival and satisfaction guaranteed.

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1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
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BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship. **Italian Queens and Bees** at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

A. F. STAUFFER & CO.,
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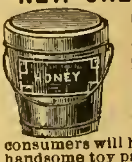
Mention the American Bee Journal.

NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the childrens handsome toy pail. **Price, 75 cents per dozen, or $5.00 per 100.**

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THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. June 21, 1890. No. 25.

Father Langstroth, when we last heard from his daughter, was very feeble and depressed in spirits. He cannot be with us very much longer, and it should be regarded as an esteemed privilege, as well as a fraternal duty, to contribute to his comfort during the short time he will linger among us.

Some years ago quite a number of apiarists subscribed to a fund creating a life annuity for our aged friend and benefactor. The time has come now for these subscriptions to be paid for another year, and we hope that every one will forward to him the amount subscribed. We subscribed $25 to that fund, and have this week sent him the amount for the coming year. We mention this to induce others to follow at once. Address, Rev. L. L. Langstroth, 928 Steele avenue, Dayton, O.

Some few have not yet sent him the amount for the past year; let such act at once and relieve their consciences, as well as make others glad. New subscribers to the annuity are solicited.

* * *

Devastating Floods, waterspouts, cloud bursts, and thunder storms have lately prevailed all over the Northwest, destroying crops, ruining houses, killing live-stock, and spreading desolation everywhere. Many apiaries have been destroyed in the general ruin, but the full extent of the loss cannot yet be determined—those in Iowa, Illinois, Ohio and Kentucky have been the greatest sufferers.

* * *

Whittier, Holmes and Tennyson, the three illustrious "Octogenarian Poets," are discussed by George Makepeace Towle in a charming literary paper, which leads off "Frank Leslie's Popular Monthly" for July. Some admirable portraits and views illustrate it.

Rev. Stephen Roese, of Maiden Rock, Wis., who was recently injured by an accident, is recovering slowly, which his many friends will be pleased to learn. In a letter written on June 14, he says:

> My condition is still a critical one. The bone-breaks are knitted together, and do not pain me any more, but the foot or ankle-joint still looks and feels badly, for the joint is stove in on one side of the foot, and out on the other, with the cap broken in two pieces. It is hard to lie here and see my bees swarm off for the woods, and no one to attend to them; but I must be patient and submit, as there is no one here that can handle bees, and my family fear the stings, as it poisons them badly, so they cannot go near them.
>
> I have just received *Der Bienenvater aus Boehmen*, and from it I translate the following items for the AMERICAN BEE JOURNAL:
>
> By order of the government of Hungaro-Austria, a "model apiary" is to be established at each teachers' seminary in the country, with *Wanderlehrers* (traveling teachers) of bee-keepers' associations as instructors, for the purpose of making teachers leaders for the people in apiculture; and in so doing, add pleasure and profit to their occupation. This is an example worthy of imitation.
>
> For the promotion of home bee-culture, the government of Baden, Germany, appropriated, in 1889, 3,000 marks; in 1890, 3,300 marks; and for 1891, 5,700 marks.
>
> These are positive proofs that European governments do not look upon bee-keeping as a "nuisance." STEPHEN ROESE.

* * *

☞ Farmer's Bulletin No. 2, issued by the Department of Agriculture, through the Office of Experiment Stations, is now ready for distribution. This Bulletin presents in a brief and practical form some of the more important results of the work done at sundry Experiment Stations. The subjects presented in this Bulletin are better cows, the effect of heat and cold on milk, silos and silage, altalfa, and field experiments with fertilizers. The Bulletin is a handy 16-page pamphlet, prepared especially, as the title indicates, for the information of the practical farmer, condensing for its use the results given on the subjects indicated in Bulletins issued from time to time during the past year by the various Stations where these subjects have been the object of special experiment work. Application should be made to the Secretary of Agriculture, Washington, D. C. A considerable portion of the edition will also be distributed through members of Congress.

* * *

☞ Like all other supply-dealers, we have experienced an unprecedented "rush" during this season, and as a result we have not been able to get some lines of goods fast enough to fill orders as promptly as is our custom. We are doing the best we can to satisfy all, and are shipping all the goods we can obtain the moment they come to hand. We hope to be able to clean up all orders now on hand in a few days, and then to resume our usual promptness for which we have a wide-spread reputation.

Poor Prospect for Honey in New York.—Our reports so far received show that the bees in central and western of New York are in very poor condition. The latest just received as these forms are closing is from Mr. W. M. Barnum, of Angelica, N. Y., and reads thus:

> Bees are in a precarious condition in this vicinity, being almost upon the verge of starvation. For some weeks past they have been living from "hand to mouth," just procuring enough for their daily needs, and nothing more; consequently brood-rearing has been greatly held back. Italians are doing the best, while Carniolans are so cross that an iron-clad man-of-war could not stand before them! But "every cloud has a silver linging," and I would keep bees if they never produced another pound of honey.—W. M. BARNUM.

* * *

The Langstroth, and not the "Quinby" style of hives, was intended in describing the large hives used by Mr. S. J. Youngman, on page 383; and that all of his hives "have either 8 or else 16 frames each." The "L" used to indicate the word "Langstroth," looking so much like a "Q" in the manuscript, and the figures being indistinct also, it is no wonder the mistakes were made by the printer. If all correspondents would only *write plainly*, and *spell out* the words, instead of using the misleading abbreviations, such errors as the above would seldom, if ever, occur.

* * *

Odd Sizes of sections, brood-frames, crates, etc., are simply impossible to get made now during "the rush." If people will use anything besides the regular stock, they should have them made in the winter, and keep them on hand ready for use when needed. All dealers and manufacturers are now behind with their regular orders, and none will now take an order for a special size—so those who use such, and have not laid in a stock in advance, will have to do without them, and learn a lesson which will cost them more or less of their crop of honey.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

* * *

For Whom a Paper is Printed.—It is worth remembering that no newspaper is printed especially for one person. People who become greatly displeased with something they find in a newspaper should remember that the very thing that displeases them is exactly that thing that will most please somebody that has just as much interest in the paper as they have. It takes all kinds of people to make the world, we are told, and the patrons of a newspaper are made up of the elements of the world.—*Pacific Clipper.*

GLEAMS OF NEWS.

While in Buffalo recently, Mr. R. F. Holtermann visited about 15 stores and asked for honey. The clerks, in each case, called it "strained." He thus comments in *Gleanings* upon his visit to the largest grocery house in the city :

> When the young man in attendance found out I kept bees, and knew honey, he asked me if the comb honey in their store was really genuine. I then read him your offer about the manufacture of comb honey, and the efforts of the American bee-periodicals to stamp out the erroneous idea that comb honey could be manufactured.
>
> Surely, a man cannot attain to the greatest success in the sale of goods if he has no confidence in them ; and surely, in that large establishment, on Main street, Buffalo, a man understanding his goods, and selecting them judiciously, could surprise the proprietor by the amount of sales which could be effected in comb and extracted honey alone ; and, on the other hand, what an outlet would be secured for the bee-keeper's honey !
>
> The extracted honey shown by this store has been packed in a large packing-house. I will not say it was impure, but it was not good ; and owing to the fact that it had passed through several hands, the price was higher than would be necessary if it had passed from the bee-keeper direct into the hands of the retailer.
>
> This matter is surely important. The next question is, "How shall it be remedied ?" The question is a difficult one. If a store could be induced to subscribe for a good, live bee-paper, much could be done to educate the salesman. Bee-keepers, too, should be wide awake, and instruct the parties to whom they sell their honey, and place them in a position to refute statements injurious to the sale of honey. An instance : A customer comes in and says, "I would buy that honey, only there is so much manufactured at the present day, I fear yours may be." The clerk, who is doubtful himself, will, if he is conscientious, shut his mouth ; if not, he may say, "This is not manufactured," etc. But if he can say with confidence, "It cannot be manufactured," and show there is a reward of $1,000 offered for the manufactured article, which has never been claimed, then he is likely to convince his customers, and effect a sale.

These are questions which commend themselves to bee-keepers to answer to their satisfaction. There is a vast work to be done to educate the people about honey—its nature and uses. A few Honey Almanacs would do a valuable work in Buffalo, as well as every other city on the continent, to inform the general public. Bee-men should judiciously distribute them by thousands, and thus aid the work—build up their home markets, and create a demand for pure honey.

☞ "Frank Leslie's Illustrated Newspaper" for the week ending June 14, contains the "Song of the Steeple," written expressly for its pages by Monroe H. Rosenfeld, author of "With all her Faults, I Love her Still." This song is one of the most spirited and delightful which this popular composer has produced.

Hunting Bee-Trees.—How to successsfully discover bee-trees was once considered quite a rural accomplishment, and many a modernized bee-keeper takes great pleasure in recounting his exploits in securing his first colony of bees from the woods. There are still localities—even in our own thickly-populated country—where much interest is manifested in hunting trees containing bees, and the necessary preparation for the bee-hunter, as well as the manner of locating the tree, are described in the following paragraph, which we take from an exchange :

> The outfit of the hunter for wild bees consists of a box of matches, some old honey-comb, and a small box with a draw cover, and a little comb honey in it. Proceeding on a warm, still, fair day to within a quarter of a mile from the woods, he proposes to test, and in the open field he builds a fire and heats two flat stones. Placing one of the heated stones on a convenient stump or rock, he puts on that a piece of old comb and covers it with the other hot stone, and then draws the lid of the box part way out, first placing it near the burning comb, the scent of which attracts the bees, and they alight on the comb honey. Gorging themselves, they disappear. The first ones to leave rise high in the air, but as they come thicker and faster, they take a "bee-line" from the box to their tree. The hunter notes this line by some large tree in the woods. He then closes the lid, shutting the bees, and proceeds to a spot to seek a line at a right angle to the first line. Opening the box, the imprisoned bees depart directly to their trees. Having this "cross line," he follows it up to the point where it intersects the first line, and there he finds the "bee-tree."

The Eighth Edition of our book, entitled "Bees and Honey, or the Management of the Apiary for Pleasure and Profit," is now published, and ready for delivery. This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, $1.00, postpaid.

Here are some of the earliest comments on this new edition :

> "Bees and Honey" was received by us a few days ago ; it is first-class, and up to the times, indeed.—Chas. F. Muth & Son, Cincinnati, O.
>
> "Bees and Honey," by Mr. Thomas G. Newman. New, revised edition, fully illustrated. A most complete manual on the honey-bee, care and management, honey-plants, etc.—*Prairie Farmer.*
>
> The latest edition of "Bees and Honey" is received. It is a gem in literature, and I consider it the finest work on the subject extant. The portraits are alone worth the money. The magnificent engravings are the wonder of the old-time bee-keeper.—S. J. Youngman, Lakeview, Mich.
>
> I am glad to see the improvement in the new edition of "Bees and Honey." New editions are needed to keep up with the march of improvement, and I wish we had twice as many good books as we now have. You are wise enough to know that whatever the contents of a book, there is an added pleasure in having a good *feel* to its pages.—C. C. Miller, Marengo, Ills.
>
> When turning the leaves of my copy of the new edition of your book, entitled "Bees and Honey," I was much pleased to find in it the portraits of so many of the leading apiculturists, and unexpectedly found my own among them. I am sure I can never pay you for the honor you have done me.—Eugene Secor, ForestCity, Iowa.
>
> We are in receipt of a new and revised edition of "Bees and Honey," by Thomas G. Newman, of the American Bee Journal. Mr. Newman is thoroughly familiar with his subject, and with the aid of 250 illustrations gives this work a highly useful and practical treatise on bees and kindred topics. We notice portraits of several of the *Stockman's* valued contributors in the gallery of noted bee-men.—*Nat'l Stockman.*
>
> The eighth edition of "Bees and Honey" is received. I must say it is the most extensively illustrated, neatly printed, and beautifully executed of the works now published on apiculture. It is a perfect storehouse of valuable information in our art both ancient and modern, and is highly creditable to the author. What a herculean task to get out such a book, and all for the sum of one dollar. I prize the book very highly.—Dr. G. L. Tinker, New Philadelphia, Ohio.
>
> A new (the eighth) edition of the well-known work, "Bees and Honey, or the Management of an Apiary for Pleasure and Profit," thoroughly revised and largely re-written, is sent to us by Mr. Thomas G. Newman, author and publisher, 246 East Madison Street, Chicago. It is a duodecimo volume of 250 pages, adorned with a great number of illustrations (including portraits of all the chief students of the bee, living and dead), and neatly bound in cloth. The price is $1.—*Country Gentleman.*
>
> I have carefully examined the revised edition of "Bees and Honey," and I find it, like everything else which comes from the office of "the old reliable" American Bee Journal, "fully up with the times." The painstaking care with which all your work is done, is here manifest, reference being made both to the subject matter and the mechanical execution of the work. It is a valuable addition to the literature of bee-keeping, and I cheerfully commend it to any one wishing a practical manual of the art.—N. W. McLain, St. Anthony Park, Minn.
>
> The new edition of "Bees and Honey" is received. It is an excellent work, with nothing lacking in perfection and beauty, and will speak for itself to the mind of every reader. It is well worthy of a large circulation. I shall use it as my daily hand-book, and recommend it to bee-keepers with whom I come in contact. It is cheering to notice the countenances of the many masters of the art, whose able articles aid apiculturists through the columns of the American Bee Journal.—Stephen Roese, Maiden Rock, Wis.
>
> The 8th edition (revised) of "Bees and Honey" is on my desk, and a gem it is ; printed on paper of the finest finish, and with the clearest of type, fully up to the times, profusely and beautifully illustrated—making it, as an album alone, worth the dollar charged for the book. In answering the many inquiries as to the best bee-books, I shall be proud to place it at the head.—Geo. E. Hilton, Fremont, Mich.

Figs of Thistles.

Oh, ye, with hurried steps and careless,
Who crush the fair, sweet flowers of spring,
Think you, in autumn, cold and cheerless,
They'll sweetest perfume round you fling ?

Think you the harsh words rudely spoken,
And thought as "trifles light as air,"
Will heal your wounded heart, when broken
And crushed by woes you cannot bear ?

Think you, the early friends of childhood,
Who spring about our path like flowers,
As sweet and pure as from the wildwood,
And nourished by soft April showers—

Will love us when the shades of evening
Are falling fast round heart and brain,
If in our youth we, thoughtless, leave them,
Nor seek their friendship to retain ?

O, ye who pluck the apple-blossom,
Its subtle fragrance to inhale,
Think not pure, spotless fruit to gather
From withered blossoms cold and pale.

—PATSY SHAMBURGER.

QUERIES and REPLIES.

Extracting from Shallow Combs Built from Starters.

Written for the American Bee Journal

QUERY 712.—If bees are allowed to build comb in frames 4½ inches deep, with only a 1-inch strip of foundation for a starter, can the same be extracted without breaking the combs?—New York.

Yes.—M. MAHIN.

Yes.—R. L. TAYLOR.

Yes.—J. P. H. BROWN.

Yes.—G. M. DOOLITTLE.

Yes.—MRS. L. HARRISON.

Yes.—DADANT & SON.

Certainly.—A. B. MASON.

I think so.—C. C. MILLER.

Yes. The bees will fasten the whole to the sides.—A. J. COOK.

Yes, except when the combs are new and tender.—EUGENE SECOR.

With ordinary care, you will not break a comb.—H. D. CUTTING.

Yes, if firmly fastened along the entire bottom.—WILL M. BARNUM.

Certainly, if ordinary care is used in running the extractor.—C. H. DIBBERN.

That is owing to how well the bees have filled the frame, and how hot the weather is when you handle them. It is dangerous. —J. M. HAMBAUGH.

Yes; and it can be safely done with a deeper frame, if the wood composing the frame is not over one inch wide all the way around. All closed-end brood-frames should be wired, but a plain Langstroth brood-frame not over 7 inches deep, needs no wire.—G. L. TINKER.

Yes, if care is used. I have now some frames of comb that were built before foundation was thought of, that can be used to extract from, and I find no difficulty in using them, although 9 inches deep.—J. E. POND.

O, yes, without the slightest difficulty. I have hundreds of combs built in the way you mention. Were it not for the tendency of bees to build drone-comb in these shallow frames above the brood-nest, I would have hundreds more of them built from starters ; but as I prefer all-worker combs, I use full sheets of foundation.—G. W. DEMAREE.

Yes, sir, and that, too, without ever inverting the frames in the hives. On the other hand, if the frames are inverted, the bees will build them solid full of comb, and be so strong that you can throw them around the apiary as you would pitch quoits, to say nothing about extracting honey from them ; but you can extract from them safely without their ever having been reversed.—JAMES HEDDON.

Certainly. The bees will fasten it and make it secure, if they have a good chance at it.—THE EDITOR.

CORRESPONDENCE.

SPACING COMBS.

How Combs are Spaced in Box-Hives, etc.

Written for the American Bee Journal
BY S. A. SHUCK.

On page 365, Dr. C. C. Miller says : "I think that it would be a favor to the fraternity, if a number would report in the AMERICAN BEE JOURNAL as to the distance from center to center of the central combs in a box-hive."

It has been several years since I measured the distance of combs in box-hives ; but the facts concerning the matter are as important, perhaps, as if the measurements had just been made.

As the combs in box-hives are very seldom built exactly straight, it is natural to expect them to vary in distance from center to center. My observations have shown, too, that there are considerable variations of this distance ; even at different points of the attachment between any two combs, this variation is found.

In computing the entire space by the number of combs it contains, it is shown in the aggregate that 1½ inches is the rule, and almost without exception. This includes drone and store comb, which, in many instances, is considerably over 1½ inches. This shows that the worker-combs do not average 1½ inches.

For the past ten years I have used 10 frames in hives 14¼ inches wide. Allowing ¼ of an inch for the extra space on one side, this gives one and two-fifth inches from center to center. However, during the time in spring when I want all the brood I can get, I space the combs so as to give ½ inch or more space on the outside of the side combs.

Both wide and narrow spacing can be made profitable at times, by a little judicious management. In this locality, it is not an uncommon thing to have pleasant weather in February. If the the bees have an abundance of honey, brood-rearing is pushed along at a lively rate, and, if allowed their own way about things, the hives are overflowing with bees by May 1, and, as a rule, no honey until June.

If, however, when this fine weather occurs so early, one comb is removed from each strong colony, and the remaining nine combs are spaced so as to fill the hive, the bees have more room to cluster, and occupy less comb, and consequently brood-rearing is not pushed along so rapidly, and the stores are not consumed so quickly. The bee-keeper who has never tried this (and then, when the time comes for encouraging brood-rearing, he readjusts the combs, spacing them as closely as possible, and replacing the comb previously removed), will be very agreeably surprised, not only at the apparent sudden increase of bees in his hives, but the very rapid increase of brood also.

The effect of "spacing" on the swarming disposition, is very slight. Observation inclines me to believe that wide spacing tends more to encourage swarming than does narrow spacing, where surplus room is given at the right time.

Close spacing tends to force the bees into the surplus, if for no other reason than to give room for the necessary operations of the nurse-bees in caring for the brood ; while wide spacing gives ample room for a large number of bees between the combs, and in cool weather their presence is actually required to keep a proper temperature, and large numbers of bees in the brood department are a great incentive to the swarming impulse. However, swarming is Nature's only method of increase, and the non-swarming or excessive swarming tendencies are freaks of individuality, and can be greatly increased or diminished by careful selection and breeding.

Liverpool, Ills.

GOLDEN-ROD.

Does it Yield Honey ?—Methods of Queen Introduction.

Written for the American Bee Journal
BY JACOB T. TIMPE.

I have carefully read the articles *pro* and *con*, as to the value of golden-rod as a honey-producing plant. The very same subject was brought up at the last meeting of the Central Michigan Bee-Keepers' Convention, which caused a lively discussion. The majority most emphatically declared that it did yield honey plentifully, at least in the most of the seasons. I have yet to see, in 14 years, but what the bees work on it more or less every season. I would not say that it yielded bountifully every season—no honey-plant will yield honey every season. White clover and basswood will fail, and would it be fair to come out boldly and say, "I do not think that there was one ounce of clover or basswood honey ever gathered?" No; nor is it fair to make this assertion about golden-rod.

One of the members remarked that "all the members present should carefully observe it this season, and then see for themselves as to whether it did yield or not." As he is not far distant from me, he made the remark that he had passed by my locality, and could not see a bee on golden-rod; yet he would not allow me to verify my statement. Locality may have some effect on it (but all about him, on all sides, it did yield, the past season); but is it fair to condemn it just because of one locality not yielding nectar?

I could not help making the remark that he would not believe me (or us) one bit more, by our carefully observing it another season, to be again contradicted, and probably be continued for another year's *careful* observing.

The party also claimed that what bees he did see on golden-rod, felt ashamed for being there, claiming that they would crawl about so slowly, as if they were almost frozen in a warm autumn day. Now, I would like to ask, which bee gathers the most honey, the one that stays on one blossom and finds employment for one minute there, or the other one that runs rapidly over the flowers and visits 25 in a minute? Most emphatically, the one that holds its proboscis in the nectaries several seconds.

When I see a bee running rapidly over a clover blossom, I calculate that it is not finding much. I have yet to see a bee ashamed in any of its undertakings—at least *mine* have never showed anything like being "ashamed."

INTRODUCING QUEENS.

I hardly approve of Mr. Bunch's way of introducing queens, as given on page 383. I could hardly advise any one to not look into their hives for 3 or 4 days, or even a week. Contrary to the advice of others, I always examine my colony as soon as I think that the queen has been released, and I have never had any fatal luck with them. I have never lost but one queen, and I think that this was on account of *untimely* assistance. Of course, I always go armed, for fear that I might find her balled.

I would like to ask those who advocate letting the bees alone for several days, Are you *sure* that balling was caused by opening the hive *too soon?* If you had cattle in a field in which there was a miry spot, and one of them did not appear, would you trust to Providence to help it out? or would you render aid? Now we will liken a colony of bees to the cattle—balling to be the dreaded spot. Could you leave a valuable bee for 3 or 4 days, when she might be in a ball of bees? I believe in rendering aid if I can, and at the earliest date, too.

Now in regard to introducing: I think that the old "Peet process" of letting the bees gnaw the queen out, is the best, as in my experience the bees release the queen too soon with the "candy" plan. The only bad luck that I had with queens, was with the "candy" plan, where in 10 hours (probably less) I found the queen dead on the bottom-board. Would leaving the colony alone for 3 or 4 days have brought her to life again?

I will say that if the apiarist knows his business, and will be very careful, there is but little risk to run; and I would further say that it might be well to be prepared with smoke to get the queen out of the ball, if necessary. At least, this is *my* opinion of them, and my ways of handling them.

Grand Ledge, Mich.

BEE-KEEPING.

Is it Practicable or Desirable for the Average Farmer?

Read at a Nebraska Farmers' Institute

BY MRS. J. N. HEATER.

Upon receiving the request for an essay on this subject, I was somewhat surprised that it should be considered a question, as to whether the keeping of bees is practicable or desirable for the average farmer, since bee-keeping is strictly an agricultural pursuit, and of the utmost importance to the farmer, if the honey consideration were not taken into account at all.

Man, in his selfishness, fosters those pursuits which give promise of profit or pleasure to himself, and according to Samantha Allen, must be reasoned with by way of his stomach; so, with visions of quantities of honey, he makes his investment in bees, not knowing he is to receive another and perhaps greater reward. To be a bee-keeper it does not follow that one must be a master or specialist, any more than he must be a fancier in order to raise his own fowls.

In my opinion there is no more fitting place on earth for the keeping of bees, than on the farm; providing, of course, that the farmer—or his wife—has the time and inclination to give them proper attention. One gentleman living near town, bought a single swarm, and in one year's time found himself the possessor of 4 colonies of bees and 40 pounds of surplus honey. Another farmer bought one colony, and at the end of 3 years, had 11 colonies of bees, and an abundant supply of honey during the whole time, for a large family. These are not cited as extraordinary cases, by any means, but simply to show what ordinary farmers in our midst are doing, who make no pretensions to giving their bees special care. I might refer you to others, who are giving more time and attention to this branch of their work, and making a grand success of it.

Let no one suppose, however, that bee-keeping is a pleasant pastime, which lazy and incompetent people can take up with success. The man who always drives poor horses and finds winter storage for his farm machinery in the open field, has no business with bees; but any man or woman who will learn the business and begin wisely, can find in bee-keeping with farming, a healthful pursuit; and supply their own tables at least, with a pure, delicious article of food to take the place of the adulterated sweets which they are forced to receive at the stores.

This, however, is only an individual benefit, except as the possessor may choose to share the spoil with his fellow man, but there is another benefit which the neighbor shares equally with the owner, for our little pets, though seldom accorded the compliment, are direct benefactors to the florist, horticulturist and farmer—in fact, to any one who wishes to produce fruit, grain or vegetables, by their constant visits from blossom to blossom, carrying the pollen from the anthers of one to the stigmas of another of the same kind; and any one with the most meagre knowledge of botany will understand that this is the plan of the Creator, for the reproduction of the vegetable kingdom; else, why would flowers depending on insect fertilization be so cunningly constructed that, in order to reach the honey, the insect must forcibly brush against the pollen, thus dusting itself in one flower and carrying it to another, where the process is repeated?

In this connection we plainly see wisdom in the instinct with which the honey-bee is endowed, to visit the same species of plant or flower until a full load of honey is obtained. Other insects do, indeed, play some part in this important work, but no other honey and pollen gathering insect increases with such rapidity in the spring, before fruit trees and small fruits blossom.

An excellent authority places the number of colonies of bees in the

United States, in 1881, at 3,000,000. During the working season the average number of bees per colony is from 35,000 to 40,000. Who, then, can estimate the benefit to the crops of fruit and grain, derived through the agencies of such myriads of little marriage priests among the flowers? This alone would warrant the keeping of bees in many localities, as, indeed, is often done.

A fruit-grower of Madison county, Neb., bought a colony of bees solely for the purpose of having them fertilize the blossoms of a half-acre of strawberries of a certain variety, and was repaid with a fine setting of fruit, while in previous years he had only obtained a partial crop.

Charles Darwin, that eminent English naturalist, whose careful experiments have added so much to our knowledge of plants and insect life, states in his work on "Cross and Self-Fertilization," that out of 125 species that he covered with netting, excluding insects when in bloom, more than half were entirely sterile, or produced less than half the number of seeds of the unprotected plants.

I will cite only two of the many so treated by him, namely, white and red clover. I quote:

> Several plants were protected from insects, and the seeds from ten flower heads of these plants, and from ten heads on other plants grown outside the net (which I saw visited by bees) were counted, and the seeds from the latter plants were very nearly ten times as numerous as those from the protected plants. The experiment was repeated the following year, and twenty protected heads now yielded only a single aborted seed, whilst twenty heads on plants outside the net (which I saw visited by bees) yielded 2,290 seeds. Of red clover, 100 covered heads gave nothing, and 100 heads uncovered produced 2,720 seeds.

Our fruits are fully as dependent upon insect life as are the clovers. For instance, take the apple; call to mind the five beautiful, pinkish-white leaves, with a cluster of yellow, pollen-bearing stamens in the centre. Then that each blossom carries five stigmas, and each stigma is connected with the core of the fruit.

At the proper time the tiny nectaries are filled with nectar, when the flower is prepared to receive the pollen-grains from the dusty bees as they are flitting among them, intent only upon their own crazy greed for honey, wholly unconscious of the wonderful part they are playing in a still more wonderful nature, for the nectar is never secreted until the pollen-grains are ripe and ready for use, when it slowly oozes forth each day—a constant bait for the bees until the pollen is ripe and gone. But as we have observed, there are five of these stigmas, and without a distinct fertilization of each one separately, an imperfect fruit is formed which in most cases constitutes the windfalls. Opposite the hollow cheek on an apple will be found miniature seeds, showing that an imperfect fertilization had taken place, if any at all, in that particular pistil. The apple being one of a large class of blossoms in which the anthers and pistils do not mature at the same time, self-fertilization is impossible, and a cross must be obtained from another blossom of the same species of plant.

Gooseberries, currants and raspberries are also largely indebted to insects for the fruit they bear, and, in the last two, undeveloped parts are often found due to imperfect fertilization, as in the apple and clover. It has been stated that unless we have a few hours of sunshine when early cherries are in bloom, we shall have no cherries at all, and we frequently have a season when cold rain-storms so prevent the bees from getting out, that not a cherry is produced.

Our prairie grasses are rapidly disappearing under the advancing cultivation of all available land, and in many localities hay and pasturage is already becoming a subject for serious consideration. Tame grasses must supply the want, but the question is, from which kind may the greater benefit be derived? I need not mention the superiority of the clovers over Hungarian, timothy, millet and red-top in regard to richness of hay, building up exhausted land, etc.; but I do wish to call your attention to the fact that with any of the clovers, still another crop may be obtained—of delicious nectar. Do not misunderstand me; this is not intended as an advertisement of bees, but the fact is indisputable that in order to secure fertilization of the clover blossoms, we must depend upon insect agencies.

Not all strains of bees are able to work on the red clover heads, owing to the depth of the floweret cup, but the bumble-bee and the Italian hive-bees having longer tongues will work on it, and especially on the second growth, which you all know is your seed-crop, though it may not have occurred to you that the very reason the second growth yields the crop of seed is because the flower-heads are smaller, and the cups shorter, making it possible for the insects to accomplish their work.

A few years ago our common red clover was introduced to Australia, and it made a most rapid growth in that warm, rich soil, but they were unable to raise one bit of seed. After trying for sometime in vain, it was suggested that bumble-bees were required to fertilize the bloom. Some nests were accordingly shipped from the New England States, and the result was considered wonderful, for seed was then raised without trouble. But the clover spread faster than the bumble-bees increased, when the same difficulty was again experienced; and in 1888, a Mr. McDonald, of Lexington, achieved prominence by his endeavor to secure $10,000 worth of Kentucky bumble-bees to be shipped to Australia.

Having shown the utility of the honey-bee in producing surer, larger and better crops, may it not safely be considered an advantage to have bees at work on every farm? In our Eastern States one is almost as certain of finding a number of colonies of bees on every farm, as the indispensable pig-sty. Certain it is, that the long row of white-painted, old-style box-hives, and the proverbial biscuit that "mother made," furnish some of the sweet memories of our own childhood days.

Columbus, Nebr.

EARLY SWARMS.

A Lady's Report as to the Condition of Her Bees, etc.

Written for the American Bee Journal

BY KIT CLOVER.

I think that I shall have to report my Carniolan bees. I put 5 colonies into the cellar last winter, following an old bee-keeper's advice by placing the hives flat on the bricked floor. I had no idea that *mice* could get in at the entrance of a hive, but I have since found that they can.

The winter was very warm, and the bees, by spells, were very noisy. I could not understand it, as they were perfectly quiet on some of the warmest days, and only one colony at a time would set up the angry roar with a stray bee or two tumbling about on the alighting-board. I think now that the trouble was that they had been visited by mice, for when taken out in the spring, there were heaps of the fragments of half-eaten bees under each alighting-board.

I stuck in a pin, right there—not into the mouse, however, as I would like to have done, but in my experience map. I shall put wire-netting over the entrances the next time.

On March 21 I took out the bees, having learned that bees can be moved in perfect safety by putting a wet rag over the entrance. This does not make them angry, or anxious to get out, but seems to quiet them.

Soon after getting the hives out, the one heavy snow-storm of the winter came, and some of the hives were drifted under. The storm coming from the east, blew directly into the entrances. I covered them with boards, but on the day after the storm, I climbed through the drifts and dug the ice out of the entrances, with a hair-pin.

As I could not open the hives for sometime, I did not know but that the bees might be hungry, so I fed them a little. When it grew warm, they dragged out quite a lot of dead bees.

Between storms and mice, I was afraid that my colonies would be very weak, but later, when I opened the hives, I found lots of honey, and quite an amount of bees, with brood already capped.

By the way, I have fed rye-flour every warm day all the spring, and mine and my neighbor's bees would carry away a pint in half a day.

During fruit-bloom we had very little time that bees could work, as it rained almost every day, but one colony of mine filled and capped every empty cell, even building and filling comb at the ends of the brood-frames.

On May 14 a swarm came out, and though I thought I cut out every queen-cell except one, the same colony cast another swarm on May 26. I opened the hive and found a half-dozen new cells, and one from which the queen was cutting. I waited for her, and welcomed her. O, but the queens are such little beauties! Then I took every possible queen-cell out. Now, will some one tell me how many days later I dare clip her wings, or must I wait until I find eggs? In that case she will have plenty of time to swarm, if she chooses, as I will not open a hive during the present dearth of honey.

On May 25, another first swarm came out, and Tom—I may as well introduce you to Tom Clover—took his first lesson in bee-keeping by going up into a tree after the cluster. Perhaps I might add, that he didn't get it. He had the bees in my big, covered bread-pan, when away went the cover, the ladder broke under his feet, he caught an upper round which broke, and down went bees, pan, and all, although Tom caught lower down on the ladder.

Then a bee-keeping neighbor climbed the tree, and shook the cluster into a four-gallon pail, with fitted cover, and —they are doing well. But I notice that the bees uncapped every bit of honey in the old hive before going.

Last night, as I went to feed the chickens, I bethought myself that we feed the horse, the cow and the calf—even the fowls—and why should one be so very stingy with the busy little bees, as to let them go hungry? So I put a pound section into each surplus case, and gave the new colonies some sugar syrup in feeders at the entrance.

I had put on the surplus-cases about the middle of the month, to prevent swarming, if possible. The bees just poured up and filled them, and began pulling out combs.

Just now there seems to be a complete dearth of honey, and I notice they cut now and then a little hole into the foundation.

The hives of my colonies, before any of them swarmed, were just simply packed full of bees—so full that I do not see how they all managed to live in there.

I have questioned every bee-keeper near me, and except one colony of blacks, kept on the sand near the river, I have heard of no other swarm issuing this spring. Do mine swarm early because they are Carniolans, or because I fed them rye-flour, or just "O, 'cause?"

One colony, in which I found a surplus of drones, and cut-down drone-cells, thinking I would put on a drone-trap immediately, began killing drones the next day, and killed every one. I supposed that it was because there is no honey coming in.

In early spring, I had one colony that carried out sick bees, somewhat swollen, and a shining black. They seem to have gotten all over it now. What is the disease? What is its cause? and what its cure?

Dubuque, Iowa, June 2, 1890.

QUEENS.

The Rearing and Shipping of Queen-Bees.

Read at the Ohio State Convention

BY MISS DEMA BENNETT.

I do not feel myself competent to undertake anything of a discourse on scientific queen-rearing, but I will simply describe my way of doing, and some of my opinions, in a very unscientific way.

I want a linen hat, a thin black veil, a good smoker, and plenty of dry fuel for it. I have a tool-box with a claw-hammer, two or three sizes of small wire-nails, and some large ones; pins and pin-cushion, a knife with two blades, an oil-crayon, pieces of clean broken sections for tablets, and tin-tags for marking the hives; a turkey feather, a provisioned cage a tin box for matches—an apartment for putting pieces of comb and wax—all in this box. Besides these there should be a honey-knife and extractor.

I have never found it necessary to have a work-room for handling either bees or cells, although I have both a work-room for making foundation, and a fancy bee-house with wire-screen doors, on the edge of the yard, where there are from 50 to 100 nuclei in the summer time.

The hive for the nucleus should be one that will take the frames in general use in the apiary, so that they will be interchangeable. I prefer the Langstroth frame, and as a chaff hive is too heavy, as well as expensive, I would use Simplicity hives; they are valuable property, and can be used for storing frames of comb or sections, when not in use in the yard, and, if one wanted to go out of the queen-rearing business, there would not be a lot of unsalable boxes on hand.

The frames should be of wood, wired and filled with foundation, and previously drawn out, or combs which are securely fastened at the edges. This is important, for in looking for the queen, or eggs, or in shaking the bees off, one is likely, if not extraordinarily careful, to tip out the comb, honey, bees and queen in a conglomerate mass, into the hive or on the ground, as the case may be.

There should be two adjustable division-boards for each hive, arranged so that there is a bee-space under each side. This saves trouble in picking up any bees that may be brushed off.

For covering the frames, use enameled cloth; over this, a burlap cushion filled with forest leaves; it is very essential that nuclei be kept warm, and there are very few nights when it is not better to use them. In case the cushion is used with the Simplicity hive, it would need to be a two-story hive. The cover should be tinned and painted to make it absolutely waterproof.

For the mother-bee I prefer a chaff hive, because quiet is insured under all circumstances of wind and weather. It should be fitted up as I have mentioned, except the frames, part of which should be of foundation without the wires, about two-thirds of the depth of the frame, and already drawn out. Drive two long wire-nails into each side of the chaff hive directly over the rabbets, and near the ends, so that they will slip in when not in use, and draw out when wanted to hang frames on, so as not to risk losing the queen by setting the frames out on the ground. There should be an alighting-board fastened at the entrance to every hive, and where queens have clipped wings, it should be long enough so that they will not fall off the end of it, if a swarm comes out, and crawl under and get lost.

WHAT THE QUEEN SHOULD BE.

The queen mother should be a well-developed queen of whatever race or combination of races one may choose —I prefer a pure Italian strain, and a queen in her second year. For the trade I would use only imported Italian queens. By getting new queens every year, there would be no danger of inter-breeding. I do not want a queen so unsatisfactory to the bees that they are trying to supersede her, either because she is too old or unprolific, or for some unknown reason; for I believe in the law of heredity in bees, as well as in man or the lower animals, and I do not think it possible (Mr. Doolittle to the contrary, notwithstanding) for a queen of the latter sort to produce as hardy, prolific queen-progeny as the former.

As soon as the apiarist sees any drones, the apiary should be looked over, and the drones in each hive graded; stimulated by feeding where you see the best ones, and destroy all others by cutting out drone-brood and replacing it with, worker-comb. By this time we have received notice that the imported queen will be here very soon, and as I cannot afford to take any chance of losing her, I am very careful to make the right preparation to receive "her majesty."

I pick out a wired frame containing some honey and hatching brood, and one of worked-out foundation without wires. By marking the latter "empty-4-31," on top of the frame with a crayon, I can tell how old the eggs are when I take them away. I either pick up one by one, or else shake into a tin boiler (the old bees will fly away) young bees enough to comfortably cover the two combs, and empty them on top of the frames.

When the queen arrives, I clip her wing, to prevent her flying away, destroy her attendant bees, and introduce her to her new home by letting her run down off of the top of the frame, keeping watch to see how she is received. I have never experienced any trouble in this way, and in one instance, the queen had commenced to lay in less than an hour. If the bees had not received her, I should have put her into a combined shipping and introducing cage, to be released at their pleasure. I would not advise this trouble of getting only young bees for a nucleus, except in the case of a very valuable queen whose time was precious.

PREPARING FOR CELL-BUILDING.

One of the strongest colonies in the yard should then be prepared for cell-building, by taking away the queen, and distributing the unsealed brood among weaker colonies, leaving only three or four frames of sealed brood and honey.

I now look into the hive of the imported queen, and if there are eggs in the marked frame, I look for the queen; if she should be on that frame, I take a small, soft twig, and place it so that she will catch hold of it with her feet, and lift her carefully off to the other frame, then hang the frame of eggs on the wire-nails in the side of the hive, that were driven for that purpose; put in another frame without wires, and with a turkey's-feather (I have found nothing better) brush the bees off and close the hive.

Take the frame of eggs and cut the bottom of the comb close to the cells containing eggs, and if there should be many eggs in the center of the comb, cut out one or two triangular pieces with the point at the top of the cut, leaving eggs around the opening, as they are much more likely to build queen-cells on the edge than in the solid comb. The pieces can be used for patching, and as I do not value this kind of a frame for any other purpose, I do not care how much they are cut.

Mark the top of the frame with the name of the queen applied to the eggs, giving the date, as "i-e-5-1," meaning that they are "imported-queen's eggs, May 1," which I consider the right time to begin, and Sept. 1 the latest to continue to "set" eggs for cell-building.

I use the oil-crayon for marking frames and tablets.

Put the frame of eggs in the center of the colony you have prepared for cell-building, leaving the space between it and the adjoining frames a little larger than for other frames, and unless honey is coming in freely, give them a quart or two of thin feed in an atmosperic feeder, inside the hive, and cover with a cushion to keep them warm.

About the fifth day after, open the hive, and if there should be any double cells started, with the point of a knife remove the larva from one, and break down the cell. I think that this is much easier than to fuss with picking out eggs with a brimstone match, and shaving combs, cutting into strips, which must be dipped into a "mixture of two parts rosin and one part beeswax;" "being very careful not to overheat it, as it will destroy the eggs in the cells if used too hot, and if too cold it will not adhere properly;" "pressing it with the fingers gently into place, taking care not to crush or injure the cells in so doing," *a la* Alley; or making "wax-cups" with "three forming-sticks, a notched block, a dish of cold water, a lamp with a dish of wax on top, an ear-spoon for scooping up the royal jelly, the stick to place the royal jelly in a wax-cup, and the tooth-pick for transferring the larvæ"—after the Doo-little plan. (I think *that* is a misnomer.)

On the ninth day break down all unsealed or small mis-shaped cells if there should be any such, and count the number of the cells left. On the tenth or eleventh day, form as many nuclei as there are cells, by dividing this building colony, and if necessary, divide some of the weaker colonies in order to make the number, giving to each one a frame of unsealed brood, marking the frame "c-e-5-11" (common eggs); also give a frame of honey, being sure that there are bees enough to cover the brood well.

I like a good-sized nucleus, as I think the queen gets to laying in better shape than in a very small one, and if I ever find a queen laying several eggs in one cell, I conclude that she has not had half a chance; and if I can increase her company, she will get to laying all right.

In making nuclei, if necessary to divide a colony, always move the queen, as the bees will stay better. I have never, in making nuclei, shut bees up or carried them to a dark room or cellar, but I do make it a point to have every nucleus supplied with unsealed larvæ at all times, both to hold the bees and keep them in balance, and to this I believe is due the fact that I never have had the trouble with laying workers that Mr. Alley and others complain of.

I am very careful not to let the cells get chilled, either in or out of the frame, and if the day is cool, I leave the bees on the frame, and only cut the cells as fast as I use them. If the day is warm enough, I take the frame of cells, brush the bees off wlth a feather (being very careful not to jar the cells) then with the small, thin blade of the knife, cut all but one of the cells, and put the frame back into the hive.

I have a box lined to put the cells in, and cover them with a piece of soft flannel, but distribute as soon as possible, by inserting one in the frame containing larvæ, and marking the frame "i-c-5-11," as well as the tablet, making a combination of the two marks, as "i-c and c-e-5-11"—(imported cell and common eggs, May 11) until all are taken care of.

Go on in this manner, having cells built; forming nuclei for them until you have broken up all the colonies that you wish, and as the bees increase, unite nuclei to make strong colonies with younger bees, for cell-building, which are better for this purpose than older ones; then sub-divide these into nuclei as needed, and so on indefinitely until the close of the season.

Some years I have numbered the hives and kept a book of record, but I always keep the record of the nuclei marked on a tablet and fastened in front of the hive. I also use tin tags which have two meanings, according to position. They are in three shapes—round, triangular and square—with a hole in the center through which a tinned tack has been pushed to its head and soldered.

The round tag placed on the front of the hive means, "needs cell;" in front of entrance, "think they need cell;" and I look again before giving a cell, and sometimes find a queen, and save the cell. The triangle in front of the hive means, "give larvæ;" and at the entrance, "give larvæ test." The square in front of the hive means, "queen is laying;" at the entrance, "think queen is laying." To illustrate:

I look the next day after giving the cells, to see if they are either torn or hatched; if hatched, I mark the tablet "Q, hatched 5-12;" if the cell appears torn, I do not mark the tablet, but put a round tag at the entrance, as I know that they have means of starting a cell, and I look again in a day or two, and if they have started cups, I change the tag to the front of the hive, and the first time I distribute cells I give them one.

Whenever I find a queen just hatched, and do not find larvæ, I put the triangle on the front of the hive. When I find a nucleus that has no young larvæ, and I do not see a queen, I put the triangle at the entrance, and in both cases give a frame of eggs at my convenience, marking the first "e-e," and the last "e-e-test," giving the date, and also marking the tablet.

When I see a queen that looks as though she was laying, but I find no eggs except in marked frames, I put the square at the entrance, and look again in a day or two, when I can tell certainly. I then change the tag to the front of the hive.

As fast as I find queens laying, I mark the tablet according to their looks and appearance—"A-a—B-b," the B's never being sent away on orders, but used in our own apiaries, the first in the home apiary, and the latter in the out apiaries. The tablet would then read, "i-c and e-e-5-11; hatched 5-12; e-e-5-16; laying, 5-20-A." As part of this record is of no use unless put in a book for reference, take a a clean tablet and write with a crayon, "I-Q, laying 5-20-A." When she is removed, I put a round tag on the hive as at first.

In addition to this, if there should be anything unusual that needs attention, I mark a tablet and tack it on the front end of the cover, "need bees," "bees strong," "need feed," "can spare honey," "caged queen," etc., and remove as soon as their wants have been attended to.

I can now go through the yard and at a glance can tell how many need cells or larvæ; also how many queens are laying, and another glance will tell me the condition of each hive.

As all of these marks are fastened to the hive, it gives the apiary a more tidy appearance than to have a lot of stones on the hives; besides, loose marks are in many ways liable to be accidentally misplaced.

AN INCUBATOR IN QUEEN-REARING.

If I have more cells than nuclei to take care of them, and do not wish to make more, I use an "incubator," as we call it. It has a wooden frame slanting in towards the top, and beveled at the corners to fit closely, and having a top with 1¾-inch auger holes in it, in which to hang the wire cloth cups for the cells, which are fastened at the top to a wire ring a little larger than the hole, so as to slip the cup in, and catch the wire on the frame; they also have a cover of mica, fastened on one side to form a hinge.

Place this incubator over the center of a full colony, putting the enameled cloth over the space not occupied by the frame, then whenever there is an extra cell, I pin it on the side of one of these cups, drop the cover, and put on a cushion to keep them warm. If there should be a large number of cells, two or three can be put into each cup, and by a little watching (as they can be seen through the mica cover without disturbing anything) the queens can all be saved. I do this by going to some place where I know they have a cell, cut out the cell, put it into the incubator, and drop the young queen off of a soft twig upon the frame, and they are almost certain to accept her.

I am sure to always have either eggs or young larvæ in the hive, to indicate the fact if she should be lost; and I also think that bees are much less liable to be uneasy if they have something to do in the way of housework in caring for the little ones; it also prevents the bees from swarming out when the queen takes her "wedding-flight" and my experience has been entirely in favor of giving, instead of taking away, unsealed larvæ when introducing virgin queens.

VIRGIN QUEEN INTRODUCTION.

Virgin queens that are several days old should be put into an introducing-cage; but if I was preparing a nucleus especially for that purpose, I would prefer the bees from a queenless nucleus, where a large part were young bees, to taking them out of the upper story, as Mr. Doolittle recommends; both because I think that younger bees would be better, and I would not wish to disturb the bees in the upper story, if they were strong enough, and willing to work in sections—and they must be, when a nucleus can be taken from the upper story.

I have never daubed or rolled in honey, or used the nasty tobacco smoke, with any kind of a queen to introduce her; in fact, I do little smoking of any kind, deeming that a quiet condition of both bees and queen is essential to success in that line; besides, I do not like to mistreat the harmless creatures that will prove to be our best friends after awhile, the most faithful of all, keeping quietly at work, although we rob them every day; and although they have a sharp weapon of defense, they meekly submit to all our caprices, without a breath of fresh air, or a glimpse of the bright sun, and the pretty flowers with their fragrant odors that are supposed to make the bee-world happy.

The way I prefer to introduce a queen, excepting those that are just hatched, is to put her into the cage as before mentioned, and when the colony is *known*, not *guessed*, to be queenless, place this cage over the top of the frames, having the opening in the cage over the opening between the frames, and having the cage raised a little so that the bees can pass under it and get acquainted with their new "mother," if such she should prove to be; but I should not expect better success with virgin queens so introduced, than with one reared in the hive, for sometimes queens will get lost on their flight, and I would not like to say, as Mr. Doolittle does in his plan of introducing virgin queens, on page 126 of his book on "Queen Rearing:" "They are now to be left for four or five days, when you will find a laying queen (providing that the queen was four or five days old when put into the cage)." Although from a large experience of both myself and others with the introducing cage, I should have no hesitancy in using these words concerning a fertile queen, for I then consider it an almost absolutely sure thing.

I do not open the hive from which I am expecting a queen to fly, neither one close by, during the middle of the day, if it can be avoided. Be very careful not to leave any sweet where the bees can get it during a dearth of honey in the fields, and if the bees are inclined to rob, do not open the hives in regular succession, but change the base of operations awhile; or, if they are too bad, leave them alone until they quiet down. If there should be danger of any one of them being robbed, just set a folding mosquito-bar tent over it, and they will soon find that they are mastered.

THE SHIPPING OF QUEENS.

For several years I used the Peet cage, with a hole large enough for the queen to pass, bored into one of the feed chambers, with a tin slide over the hole in the side, making a combined shipping and introducing cage; but on account of its large opening for the bees, and the tin cover, it is objectionable, although it is the easiest to put the queen and bees in, that I have ever seen. Last season I used some of the Benton cages, with the opening in the wire-cloth, for introducing the queen. Although I am not quite satisfied with any cage that I have ever seen, I think that a combination cage is the only successful way of supplying the trade, for many people have not the time, knowledge or inclination to introduce a queen successfully in any other way.

The candy is made in the old, familiar way, with pulverized sugar and honey mixed until it gets over being sticky, and then pressed very closely into the apertures designed for it, a paper being put over that, and the wire-cloth is tacked on over all.

With the Benton cage, having the opening come over the feed chamber, cut the paper the size of the hole in wire-cloth, and leave the other end loose to put the bees in. Having the provisioned cage ready, I select the nucleus that I wish to take the queen from, open the hive and lift the frames until I find her, when I hang the frame she is on in a comb-holder, keeping my eye upon her; then lift her carefully by the wings, and put her head first into the cage; then in the same manner put about 12 worker bees into the Benton cage, and 20 in the Peet cage, providing the weather is at all cool; a less number may answer in warm weather.

Securely fasten the wire-cloth, then fasten the cover, which is raised a little from the cage for ventilation; besides this, to make doubly sure of giving no trouble to mail agents, tie with a cord both ways around the cage. I like to ship the first of the week, so as not to have the cages left in the post-office or mail-bags over Sunday, and we do not take them to the post-office for the fast mail-train which takes the mail-bag on without stopping, as the sudden jar of taking on the mail might injure the queen.

UNITING IN THE FALL.

I select the nucleus having the queen that I wish to be the mother of the colony; lift the frames from the hive they are in, to one that is suitable for wintering; arrange the frames as if it were a full colony, and when they are nicely settled, I take one or two nuclei that I know to be queenless, and shake the bees in front of the prepared hive, distributing the extra brood where there is not a laying queen, to let it hatch out. If this is done in the middle of the day, and I wish to move the nucleus hive then, I move the nearest hive pretty well up to its former stand to catch the bees flying.

If I want to be sure to get all of the nucleus, I leave the hive with a frame of honey to catch those flying, and, towards night, I brush them into the united colony. I follow this plan until all are united.

I do not know anything about the virgin-queen trade, but I should not expect it to prove satisfactory, neither the rearing of two queens in one hive, except for the purpose of seeing what one could do, just out of curiosity.

Some may think that this has been a chapter of "I's;" but if I have made it plain to you, that you do not need a lot of odd fixtures; that a *little* care will produce good cells; that unsealed larvæ make the bees happy; that queens can be introduced without tobacco or a cup of honey; and that you can mark the hives without bricks, stones or grass, I shall have accomplished more than I expect.

Bedford, Ohio.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith. Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM
OUR LETTER BOX

Results in 1889—Good Prospects.

My report for 1889 was not very encouraging. In the spring I had 10 good colonies to start with, from which I had 20 swarms, 300 pounds of extracted honey, and 150 pounds of comb honey, with no fall honey to speak of. I put 29 colonies into the cellar on Dec. 5, and took out, on April 4, 1890, 24 good colonies, 4 having starved, and one was queenless after that. For over a month bees could not fly half a day, and in that time I had 4 colonies robbed, and 3 swarmed out, and of course were killed by the other bees, which leaves me now 17 colonies. Fruit trees are all in bloom, with good prospects for the season.

W. B. RAY.

Alaska, Wis., June 9, 1890.

White Clover and Basswood.

White clover is just beginning to bloom; basswood is promising well as far as plenty of buds are concerned, and both are promising well, if the weather will be so that it will yield honey. But the spring has been so backward that bees did not breed up very fast, so if it does yield, the amount gathered will not be so very large, after all. We had too many frosts in May, and the bees were obliged to cease brood-rearing, or they would have starved—some have actually starved.

JACOB T. TIMPE.

Grand Ledge, Mich., June 7, 1890.

Wet Weather—Section Folder.

I keep a few bees in northwest New York. The bees are in a starving condition just now, as there is no honey to be had, on account of wet weather. Apple-bloom did not amount to anything. The white clover is peeking out now, and we hope for a good crop. My bees did well last year. The winter was mild, so they wintered well, and were in good condition this spring.

I have made a foot-power machine to put sections together, and it works well. I can put together 25 in 2 minutes. It is handy and easy to work. I am a stone-cutter and builder, but on account of a gun-shot wound in my right shoulder I had to quit my trade, and so I keep a few bees to help make a living. I wonder whether there are any other comrades who keep bees, or read the great guide for bee-men—the AMERICAN BEE JOURNAL.

M. M. RITTER.

Seneca Co., N. Y., June 9, 1890.

Spring Cool and Late.

The winter loss of bees in this part of Iowa was at least 60 per cent., mostly from starvation. I lost 30 colonies out of 95. The honey-flow is very good here now, when the weather will permit the bees to work. Too much rain and cool weather keeps them back about half of the time. Some bee-keepers lost all they had in winter, while others lost a part. The spring has been very late, cold and damp since the first of May. April was dry and cold, though white clover is plentiful, and has plenty of honey in it. If we have good weather soon, we will have a fair crop of honey.

J. R. ESKEW.

Shenandoah, Iowa, June 11, 1890.

Wintering Bees—Honey-Dew.

I have been successful in getting my colonies all through the winter and spring, except one that lost its queen, and was robbed while I was away at work. I had one swarm on May 20, it being the only one I have heard of in this vicinity, except 2 that starved out. Bees are booming now on the tulip blossoms and white clover, with a good prospect for basswood in July; but I had to feed them up until about a week ago. I think that one-third of the bees in Western Pennsylvania have died from starvation this spring. Unpardonable neglect killed them. "Anything that is worth having, is worth caring for," is my motto. Double-walled hives packed and covered with some material that will absorb the dampness arising from the bees, and sufficient ventilation, have scored another point over cellar-wintering.

I think that some of the "close confinement" advocates must feel chagrinned this year. Has any bee-keeper ever seen a swarm of bees go into a hole in the ground, or into a cellar, of its own accord? I believe that there are a few stories told of bees being in the rocks in some parts of the world, but is there any proof of it? I think that bees have been found in almost every conceivable place except in a woodchuck hole, therefore I conclude that they are like the Irishman, who, when asked to dig coal. replied. "Be jabbers, I was born above ground, and I am going to die above ground." But let us hear from the old veterans through the AMERICAN BEE JOURNAL—the *ne plus ultra* of all bee-papers.

The twig referred to on page 364, arrived, but so dried as to be of little use. In my article on page 314, I asked for a dead leaf of last year's growth, as a proof of the assertions of some men that it was *dew*, or that it falls as a spray from the excretionary glands of the insect; so the leaf and insects which Mr. Tyrrel sent, are not, in my opinion, any proof of the case, *pro* or *con*. But my bees are of more importance than honey-dew just at present.

T. C. KELLY.

Slippery Rock, Pa., June 9, 1890.

Bees in Poor Condition.

Bees are in poor condition here—the worst that I ever knew them at this time of the year.

W. M. WOODWARD.

Bonfield, Ills.

Worms in Hives—Starters.

1. When I open the hives, I sometimes find worms on top of the frames. Must I clean off all the propolis found there, in order to remove the worms? 2. Is it necessary for bees to have space between the quilt and frames? 3. Why not let the quilt fit on top of the frames, and keep the worms away from such secure retreats? Recently I took some nice white comb that I had saved over from last year, and cut it in small pieces for starters in sections. I warmed one side of the pieces on a sad-iron, and laid the warm side in the section, where I wanted it, giving the comb a slight downward pressure. It seems to be fast, and looks as if it would invite bees to go to work at once.

J. R. MCLENDON.

Naftel, Ala.

Mr. Heddon replies to the above as follows, by request:

First, to get rid of worms, keep Italian bees, and do not let pieces of comb lay around for moth-millers to breed in. No, do not clean off anything in order to get rid of worms; keep the apiary clean and the colonies strong, and they will take care of the interior of the hives. Moths breed outside of the hives in old pieces of comb that you left around carelessly, or else your neighbors do. Do not use any quilts. Put on a board cover with a bee-space beneath it. Second, the combs stuck fast if you melted them; probably not otherwise. Comb foundation is much better than any kind of combs, and also much cheaper.—JAMES HEDDON.

Excellent Results Last Season.

There is an abundance of white clover now, and bees are booming. I had 46 colonies last spring, and they gave me 2,000 pounds of extracted honey, and 3,000 pounds of choice comb honey. I expect to do hardly as well this year. One colony, last year, gave me 350 pounds of comb honey in 1½-pound sections, and one swarm, which also gathered 100 pounds. I call that good. My sales of comb honey averaged 14 cents per pound. I have 44 colonies this spring, having lost 2 during the winter from queenlessness.

O. A. CORY.

Frankfort, O., June 9, 1890.

Too Rainy for the Bees.

My bees are out of danger now, and in good condition, with a loss of only 2 colonies. In this part of the country, there are very few bee-keepers that did not lose nearly 50 per cent. I claim that what saved my bees, was that I removed them from the cellar at the right time. I did it in February, as they were very uneasy by that time. I think that I am the only one that puts the bees in the cellar late—about the middle of December, and take them out on Feb. 15. We have had rainy weather nearly every day, so the bees have gathered but very little honey yet, but they are ready to swarm at any time if the weather becomes right.

FLORIAN RUEDY.

Buffalo City, Wis., June 7, 1890.

Swarming Later than Last Year.

The bees in this part of the country wintered well, but we have had a cold, wet time so far, and not much for the bees to gather. Mine are getting strong, but I think that swarming will be 20 days later than it was last year, but there is a good prospect for plenty of white clover here, and I hope to get some honey from it.

J. P. SADLER.

Kinsale, Ont., June 10, 1890.

Big White Clover Bloom.

The prospect for a big crop of honey was never better in this part of the country. Bees are booming on raspberry; there is a big white clover bloom already out, and a grand lot to follow—never was anything like it before. Bees all wintered well around here, and are in good condition for the harvest.

F. E. BURROWS.

Delavan, Wis., June 7, 1890.

Good Honey Crop Expected.

We have had a very unfavorable outlook for bees this season. To-day is the first that the bees have done anything this spring. I had to feed them all through May, to keep them breeding. I have 17 colonies in fine condition for the white clover bloom, which is here now. If the weather is favorable, we expect a good crop of honey this season. There is considerable Alsike clover in this vicinity, which beats anything for honey that I have ever seen. My report for the last season was 10 colonies, spring count, increased to 35, by natural swarming, sold 18 colonies, and obtained 1,100 pounds of comb honey in one-pound sections, that sold at home for 12½ cents per pound.

J. F. MCALISTER.

Eden, Ills., June 7, 1890.

Late Season—Supers for Honey.

Bees wintered well on the summer stands, as all bees are wintered in that way in this valley. Swarming has just commenced, the season being two weeks later than usual. Alfalfa is just beginning to bloom, so the bees will have a boom until the frost kills the bloom in the fall. Alfalfa and Alsike are our best honey-plants in this part of the country. We do not have to plow or hoe to keep the weeds down, either, like the New York man does.

I will try to describe a super that I made and used last summer. If anything like it was ever made, or used, I have not yet known it. It is made the proper size to hold the number of sections required; the end pieces are rabbeted on the inside at the bottom of the case, by using thin slats 1½ inches wide to protect the bottom of the section, nailed to the end pieces. One side of the super at one end is hung by two small brass hinges, and the other end is fastened by a small hook. By opening the side of the super, you will have free access to the sections. Try it, and report.

F. H. MCDONALD.

Star, Idaho, June 2, 1890.

Colonies are Very Strong.

Our bees came out of the cellar in good condition, and the colonies are very strong now. White clover is just commencing to bloom here.

C. J. DONALDSON.

Lapeer, Mich., June 9, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, June 5.—There is no comb honey on the market, but a small stock of basswood extracted and California; new Southern extracted is arriving, but the quality is mostly inferior. We quote: Extracted basswood and California, 7c; Southern, 65@70c per gallon. Beeswax, scarce at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 5.—The receipts of the old crop of comb honey have been quite liberal the last two weeks. Demand lighter, dealers only buying one case at a time. We quote: White 1-lbs., 13@14c; dark 1-lbs., 10@12c. Extracted, very slow sale; white, 5@6c; dark, 5c. No beeswax in the market.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, June 5.—Demand is now very light for comb honey, and will be for the ensuing two months. There is not much on the market, and very little of it is in desirable shape for the retail trade, being in supers and just as removed from the hive. Best brings 13@14c, and off-grades about 10c. Extracted, 6@8c. Beeswax, yellow, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, June 3.—Best white comb honey, 13@14c; other grades, 10@13c. Extracted, slow demand at 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, June 11.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, June 10.—Demand for comb honey is slow, and prices nominal. There is but little on the market. Extracted honey is in good demand at 5@8c, according to quality. We bought to-day the first 4,000 pounds of new extracted clover honey.

Beeswax is in good demand at 24@28c. for good to choice yellow.

C. F. MUTH & SON,
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and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
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☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

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Now Ready to Ship Tested Italian Queens, $1.00 each; Untested, 75 cents, or three for $2.00.
25Atf **GOOD BROS.**, NAPPANEE, IND.
Mention the American Bee Journal.

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24A4t **WILBER G. FISH, Ithaca, N.Y.**
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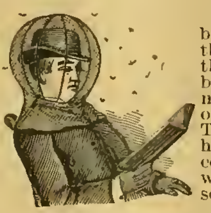
The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

☞ IN A RECENT FIRE ☜

The netting of 60 dozens of these Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each or two for $1.10,** if ordered at the same time. They are practically just as good as ever, but slightly soiled. To secure these at a bargain—**Order at once.**

We will send this Veil and the BEE JOURNAL one year, for **$1.50**; or we will give the Veil **FREE** for **two NEW subscribers** to the BEE JOURNAL—[or one for the BEE JOURNAL and one for the HOME JOURNAL] for one year, with $2.00 for the subscriptions.

THOMAS G. NEWMAN & SON,
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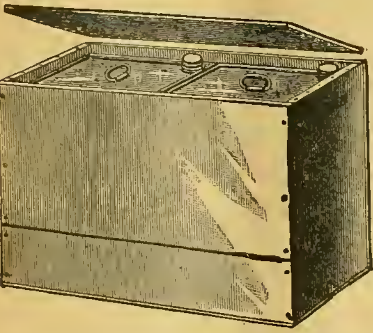
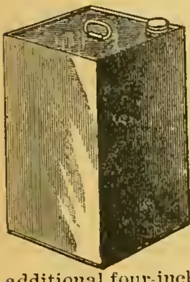
WILL sell very cheap my entire outfit of 10 strong colonies of Bees, extra Hives, Supers, Sections, etc.
F. WARDELL TAYLOR.
24A2t LANGHORNE, PA.

IF YOU WANT BEES
That will just "roll" in the honey, try **MOORE'S STRAIN OF ITALIANS**, the result of 11 years' careful breeding. Prices: Warranted Queens, $1.00 each; 3 for $2.50. Those who have never dealt with me, I refer to A. I. Root, Medina, O., who has purchased of me, during the past 10 years, 415 Queens.
Address, **J. P. MOORE,**
25A1t **Morgan, Pendleton Co., Ky.**
☞ Money Order Office, Falmouth, Ky.

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can ....(boxed).........$	.45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans................	.75
12 boxes "	8.40
100 " "	65.00

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Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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MUST BE SOLD AT ONCE,

To Allow me to Remove to Colorado Springs.

"You have the best Carniolans in the country." —H. ALLEY. Select Imported Queen, $5.00; Untested, $1.00; ½ doz., $5.00; one pound bees, $1.00; 3-frame Nucleus, $2.50. Full colony in Simplicity one-story Hive, with nine Frames, $5.00; add price of Queen you want. Queens by mail,—others by express or freight as directed. Safe arrival of all guaranteed. Remittance of currency, bank-draft or money order must accompany order; 10 per cent. discount on orders of $20.00 or over.

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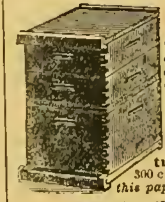

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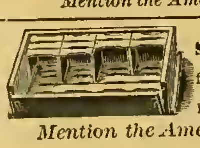
Mention the American Bee Journal.



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BEES & QUEENS. Send for free catalogue. Address
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New and Revised Edition
—OF—

BEES AND HONEY,

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Management of the Apiary
FOR PLEASURE AND PROFIT
—BY—
THOMAS G. NEWMAN,
Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

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SECTIONS $3.00 per 1,000. Foundation, Alsike Clover Seed and Japanese Buckwheat, cheap as the cheapest. Special prices to dealers. Send for our FREE PRICE LIST. **M. H. HUNT,**
1Dtf BELL BRANCH, MICH.

Mention the American Bee Journal.

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

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Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.75; or the two Journals and the Book for $2.50.

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On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. June 28, 1890. No. 26.

EDITORIAL BUZZINGS.

Aglow with her roses, June days will die—
The bees are busy; the winds are gay—
A chorus of birds chant roundelay,
And winged things float on the sunbeams by.

The world is glad, and never a sigh
Breaks on the joy of the longest day—
Aglow with her roses June travels by,
The bees are busy; the winds are gay.

☞ Excessive swarming interferes with gathering honey. To prevent this, destroy the queen-cells as fast as they are built, and give the bees abundance of room to store honey.

☞ By paragraph 230 of the Saxony Book of Laws, bee-keepers in that county are sole owners of an absconding swarm for two days after swarming, the swarming day not included, if found on any property; but damages, if any occur, must be paid by the bee-keeper. After two days the swarm is considered ownerless.

☞ Shade for hives, in excessively warm weather, is desirable. It may be done with cloth or boards on a light frame.

☞ "First Principles in Progressive Bee-Culture," by G. K. Hubbard, is the title of a pamphlet of 68 pages, just issued by the author, whose Catalogue of 40 pages is added. It contains a digest of the art of bee-keeping, which will be very valuable to the beginner and the amateur, who have none of the larger and more extensive books.

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

To Sell the Honey Crop, let all now prepare in advance. The home market is the place to sell all that is possible, and in this way the city markets will not be overstocked, and good prices can be maintained.

Remember that a liberal distribution of Honey Almanacs among those you expect to buy your honey, will prepare them for purchasing, and create a demand for it. These should be distributed *in advance*, and you will be surprised at the market you have at your very doors.

When selling honey, leave an extra copy to be given to friends of those buying it. The experience of all who have used them is uniform as to the result—*large and unexpected sales!* Try at least 100 copies, and surprise yourself at the result. See page 437 of this JOURNAL for prices.

Lady Bee-Keepers seem to have almost completely occupied the "correspondence" columns of the BEE JOURNAL last week—did you notice it? Messrs. Shuck and Timpe were ably and gracefully followed by Mrs. J. N. Heater, Kit Clover and Miss Dema Bennett, in three respective articles descriptive of general bee-keeping, a graphic report of the condition of bees in the spring, and closing with a complete chapter on "Queens." In the articles of this trinity of "queenly" correspondents is illustrated quite clearly the fitness and adaptability of women to the art and industry of modern apiculture; and that with patient and persevering application and devotion to the demands of the proper culture of bees, our worthy sisters may achieve honor as well as pecuniary success.

☞ We have just heard of the death of Mr. S. B. Ryder, of Brandon, Vt. He was the editor of the Brandon *Union*, and a vigorous and pleasing writer. His wife writes thus:

> He was much interested in bee-culture; but from press of business and poor health, the practical part fell to me, which I enjoyed, and I still keep the bees, and hope to increase and build up a business, as they are doing well. Your book, "Bees and Honey," was the first bee-literature that I invested in, and I find the revised volume delightfully new and fresh.

☞ C. W. Dayton has published ten pages of additional matter to his recent book, entitled, "The Queen-Restrictor," with an engraving which shows his method for fastening 5 brood-frames together with queen-excluding zinc at the bee-spaces and outside frames.

☞ By the Patent Office Report we notice that a patent was issued on June 17, 1890, to Henry Alley, on his Bee-Swarmer, which was described and illustrated on page 27, of the BEE JOURNAL.

Father Laugstroth is again heard from through Mrs. Cowan, his daughter In acknowledging the reception of our subscription to his Annuity, she writes as follows:

> DAYTON, O., June 18, 1890.
>
> MR. THOMAS G. NEWMAN.—*Dear Friend*.—How I wish that you might have the pleasure of a letter from my dear father himself, conveying the appreciation of your friendship, which his loving heart knows so well how to express. He is still, however, unable to write, and is no better than when I wrote you last. He feels your kindness deeply, and said, when I read him your letter, "Mr. Newman has been a faithful and most kind friend to me always. The Lord will reward him."
>
> With the kindest regards from my father and myself, Your sincere friend.
> ANNA L. COWAN.

We hope all those who subscribed to that Fund will remember to send the amounts to him as soon as they can spare them. His address is: "Rev. L. L. Langstroth, 928 Steele Avenue, Dayton, O."

Knowledge, a new weekly magazine, occupies a new field, and if it accomplishes what it undertakes, it ought to be indispensable to every owner of a Cyclopedia. It proposes to answer the almost infinite number of questions upon which one ordinarily consults a Cyclopedia, and *fails to find the answer*, generally because the Cyclopedia is not "up to data"—it was published, probably, five years ago, or, mayhap, ten or more years ago. "The world moves," and the most important questions that want answers are of *to-day*, not of yesterday. For instance, Caprivi succeeds Bismarck as Chancellor of Germany; who is Caprivi? How do you pronounce his name? A terrible storm at Apia. Where is that? How do you pronounce it? A revolution in Brazil a few weeks ago. What is the new status? And so on. If you consult any Cyclopedia, and fail to find the answer to your question, or you find authorities differing, send a postal card to *Knowledge*, and find your answer in the next week's issue. The magazine is published in handsome and handy form, and a complete index is promised twice a year, with bound volumes at a nominal price to its subscribers. A specimen copy of the magazine will be sent free to any applicant. The price, like all the issues of this publisher, is hardly more than nominal—$1.00 a year. J. B. Alden, Publisher, 393 Pearl St., N. Y., also Chicago and Altanta.

☞ The excellent article in this issue of the BEE JOURNAL, by Mr. R. McKnight, on the "Composition of Honey," was written for competition last winter in response to the offer of prizes for essays on Extracted Honey. Its extreme length ruled it out of competition—the limit being 2,000 words—but it will be considered a very valuable contribution to bee-literature by our readers generally, and will be read with more than ordinary interest.

GLEAMS OF NEWS.

Pastor Weygandt's Lectures are thus commented upon in the Leipziger *Bienenzeitung*, and translated by the Rev. S. Roese:

"Flacht, a secluded spot in Germany, has become noted for its second course of lectures on Modern Bee-Keeping, by Pastor Weygandt, given on April 7 and 8, 1890. Bee-keepers from all parts of the Continent (from Russia, Sweden, Luxembourgh, and Switzerland) were present; about 70 in number. Over 100 visitors from the surrounding country were present daily. The people of Flacht did all in their power to welcome their guests; to add to their comfort, and make them all feel at home during the session. Mr. Dathe, the noted master of the art, aided the exhibition by bringing 67 colonies of bees, with boxes and supers, and placing them, with the rest, on the practically arranged stand.

"The interesting lectures were introduced by the remarks of Teacher Stark, and Herr Rudolph Dathe continued the interest in his skillful way of illustrating successful bee-keeping.

"Pastor Weygandt followed in his masterly, fluent and charming way of presenting points and facts of wonderful interest, worthy of being well digested by all who heard him.

"Every question asked by any man or child was answered gentlemanly and politely, and all fears that the course of lectures might be a one-sided one, became banished by the 'truth and fact' as ruling elements.

"The arrival of the bee-keeping friends was full of joy and gladness, but the parting was sadness and sorrow, because love and good-will had kindled and filled each heart."

* * *

Boys and Bees.—Mrs. L. Harrison, in the *Prairie Farmer*, has this to say about the use of Decoy Hives, and the fun the boys often have with catching bees:

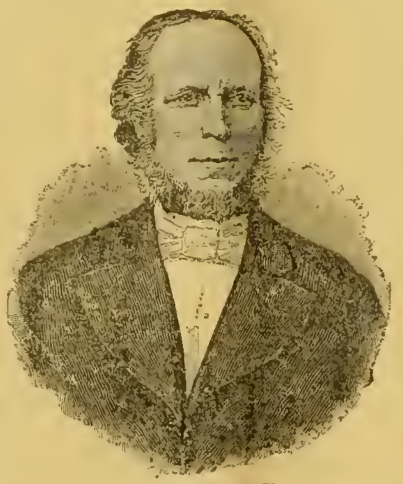
> Boys, now is the time to place hives to catch runaway swarms. I knew of a farmer who had 3 colonies of bees; they all died one very cold winter, and he left the hives standing upon their summer stands. It was on the prairie, where there was no hollow trees, and during swarming time the hives were all filled by runaways. He had a hard time to keep one from taking possession of the side of his house, going through a knot-hole. In the fall the hives were full of honey, and there was plenty of surplus for the family.
>
> In the State of Connecticut, there is a law against setting decoy hives in the woods, or anywhere else, to catch runaway bees, making it a misdemeanor, punishable by fine or imprisonment. It is a foolish law, and is no doubt a dead-letter on the law-books. It is humanity, boys, to take care of the little "fellows" who have been silly enough to run away from home, hunting for a hollow tree. See how many you can catch, and report to us.

BIOGRAPHICAL.

Johann Heinrich Ilgen.

The Rev. Stephen Roese has translated for the AMERICAN BEE JOURNAL the following biographical notes from the *Deutsche Illustrierte Bienenzeitung* for January, 1890, of the noted bee-keeper whose name is found at the head of this article, and we have re-engraved his likeness from the same source:

The editor of the weekly *British Bee Journal*, Mr. Cowan, said on one occasion while publishing the biography of a German bee-keeper, and speaking of ministers and teachers, that "there are more wide-awake and energetic bee-keepers among this class of people, than any other." How true this saying is, is proved by both home and foreign bee-papers. We remind the reading public of Dr. Dzierzon, Langstroth, Schoenfeld, Weygandt, Rabbow, Schachinger, Schmidt, Kanitz, Lehzen, Krancher, Albertz, Fullerer, Seilen, etc. With those men, especially the teachers' class, the man whose biography and likeness here given, is closely connected.



Johann Heinrich Ilgen.

Mr. Ilgen was born in Palzin, near Pomerania, Prussia, on Jan. 27, 1829. He attended the teachers' seminary at Koeslin (Pommern), and after four years and a month of faithful service, he was appointed teacher at Ruegenwalde, in Zanow, in 1854, and in 1860 he was called as seminary teacher to Cammin, where it became one of his duties to instruct the seminary pupils in apiculture; for this latter additional work, Mr. Ilgen received not one penny. Only 6 colonies of bees were furnished him, and the income of these, if any, was to be for himself, which did not amount to much the first few years, on account of poor pasture; and had it not been for Mr. Ilgen's continuity and faithfulness in all his engagements, he would not have remained true to apiculture, but nothing could discourage him. Although his income from bee-culture was small, yet with untiring efforts he aimed to spread the knowledge of this science.

For his home community his efforts have been crowned with great success; for those whom he had served as teacher, knew how to value that which they had learned, and by their practice and deeper searching, they added greatly toward apicultural knowledge.

After this he founded the bee-keepers' association at Cammin (Prussia), with only 11 members. His onward steps were mocked and sneered at, yet nothing could move him, and shortly after a rich honey-harvest was realized, even in Pommern, and the time came when honey was not only sold by the hundred weight, but it was of excellent quality also, and far better than by the way of stationary combs. in old-fashioned hives.

In the meantime, light had dawned upon the people, and the Cammin Bee-Keepers' Association embraced 13 branch societies, with a membership of 500, who, in the spirit and with the mind of Ilgen, remained active and at work, and what their associations have proved capable of doing, has fully been made known at the great exhibition and gathering of bee-keepers at Stettin, where many carried with them even Ilgen's lectures, which he had delivered in cities and villages, and his hints on rational bee-keeping—a book which has been published in three editions, and also his practical hive, called the "Ilgen Lagerkasten." His method of bee-keeping can truly be called that of a pedagogue.

He is not a stormer in his advancement to overthrow at once everything old, but he connects to that which is known, the unknown new thing; he lets the people keep, at first, their old hives, and taught them to harvest honey in them, without killing the bees for the honey, and showed them the advantages of the new method with movable frames, which caused the people themselves to adopt movable-frame hives.

He was twice happily married, three children resulting from each. Ilgen was enabled to attend many bee-keepers' conventions, where he, as a speaker, was always listened to with great interest, and his labors never lacked appreciation; this is proved by the many medals he received, among which is one of gold, and several of silver; but the highest honor and token of appreciation of his service, rendered for the advancement of apiculture, was bestowed upon him on the occasion of the gathering of bee-keepers at Stettin (Prussia), when Graf Behr, of Regendank, handed him that which showed that His Majesty, Emperor of Germany, had presented him with the Royal Kronen Order, 4th Class.

May God grant life, health and prosperity to this useful man, that his services in the interest of apiculture may long continue.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

* * *

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

* * *

The Honey Almanac is just the thing to use to sell your new honey, as soon as it is taken from the hives. Just order some printed, stating your crop of *new honey* is ready for delivery. It will go like hot cakes! See prices on page 437

Love Among the Clover.

Over and over the purple clover,
  Under the greenwood tree,
Sweet Bessie came straying,for wild flowers Maying,
  And sung in her maiden glee :
      "O hey, O ho !
      There's a laddy I know
  Who joys my face to see.
Fair blossoms, I pray, what shall I say
  When Robin comes wooing o' me,
      Dear heart—
  When Robin comes wooing o' me ?"

Over and under the boughs asunder,
  Through the wood came Robin ere long ;
In the olden fashion he caroled his passion,
  And the hawthorn swayed to his song :
      "O hey, O ho !
      The way I know—
  She dropped me this flower to tell ;
But what she will say this blossomy day ?
  Would that I knew it as well,
      Dear heart—
  Would that I knew it as well."

Over and over the fragrant clover
  The bees were humming till late,
And where is the laddy, and what luck had he,
  A-wooing his blithesome mate ?
      O hey, O ho !
      They walk so slow,
  Brown Robin and blushing Bess ;
But what did he say in the wood to-day ?
  I think I will leave you to guess,
      Dear heart—
  I think I will leave you to guess.

—SAMUEL M. PECK.

QUERIES and REPLIES.

Carniolan Bees—Are they Superior to Italians?

Written for the American Bee Journal

QUERY 713.—1. What are the objections to the Carniolan bees? 2. Wherein are they superior to the Italians? 3. Is it a fact that they rear more drones?—G. W.

I have never tried them.—J. P.H. BROWN.

See my article on page 39.—A. J. COOK.

I have had no experience with them—R. L. TAYLOR.

I have had no experience with them.—MRS. L. HARRISON.

I have had no experience with Carniolan bees.—J. M. HAMBAUGH.

I cannot answer either question. I have had no experience with them.—M. MAHIN.

1. Their color. 2. Comb honey stored by them is whiter than when stored by Italians.—A. B. MASON.

I have not had enough experience with them to give a just answer.—EUGENE SECOR.

1. As yet I see no objections. 2. There is a great difference in Italians. 3. Not with me.—H. D. CUTTING.

1. They are black, and it is impossible to detect whether they are pure. 2. In no way that we know.—DADANT & SON.

1. There are none. 3. They rear no more drones than other races, under similar circumstances.—C. H. DIBBERN.

I never had any. The stories of their swarming scared me. Besides, I am afraid I could not tell them from blacks or hybrids. —C. C. MILLER.

1. They cannot readily be distinguished from the German bees. 2. I do not think that they are. 3. Drone-rearing is controlled by the amount of drone-comb allowed in each hive.—G. M. DOOLITTLE

1. "Excessive swarming," I believe. 2. In early and steady brood-rearing ; in non-use of propolis, gentleness, and superior honey-gathering qualities—working earlier and later. 3. I think not.—W. M. BARNUM.

1. None that I know of. 2. They cap their combs so as to appear whiter. 3. They do rear more drones even when no drone-comb is given to them ; but I may not have had the best strains on trial.—G. L. TINKER.

1. I do not know that there is any objection to them. 2. I do not think them superior to the Italians ; they are said to be better tempered, and not to stick to the combs as closely as the Italians. 3. I have never heard that they reared more drones, but they are said by some to swarm too freely.—J. E. POND.

I will not try to answer this question for I have not had enough experience with Carniolans. I believe, however, to-day, that a judicious and well bred cross between the best strains of Italians and Germans, are superior to any other race of bees or cross breed of bees yet known to bee-keepers.—JAMES HEDDON.

1. My chief objection is that they belong to the dark races of bees, and there is no distinguishing marks that will certainly identify them as pertains to purity. 2. That is the question exactly. Are they superior to the Italians ? It is best to wait and see "wherein they are superior." 3. They are a prolific race, and this trait insures plenty of drones. I have the stock right from their native home in upper Carniola, and I aver that they are so nearly like some individual hybrids to be seen in any Italian apiary, that no man living can distinguish them. So far as I have tried them, they are the best of all the dark bees I have any knowledge of, but I must wait for further developments.—G. W. DEMAREE.

Bees Living on Pollen in the Summer Time.

Written for the American Bee Journal

QUERY 714.—How long will a colony of bees live on pollen alone in the summer, if there is no honey in the hive, and none to be had from the flowers?—Minnesota.

Not long.—JAMES HEDDON.

I do not know.—H. D. CUTTING.

I cannot say.—R. L. TAYLOR.

Not many days.—M. MAHIN.

I have never tested it.—MRS. L. HARRISON.

Not but a very short time.—WILL M. BARNUM.

I have never experimented along that line.—J. M. HAMBAUGH.

I think that they would starve very soon. The exact time depends upon their activity.—A. J. COOK.

I do not know, but my opinion is that they would not live very long.—EUGENE SECOR.

I do not know, but I do not think that they could exist many days without some honey.—C. H. DIBBERN.

I never tried it. I have had them starve with plenty of pollen in winter, but I do not know how long they were at it.—C. C. MILLER.

Much depends in this question. The bees have access to water. How do we know that the bees are not getting some honey from the flowers ?—J. P. H. BROWN.

They will not live many days, that is certain, if no honey (absolutely none) is in the hive, or to be obtained from the flowers. —G. L. TINKER.

I do not know. Through carelessness, I have tried to keep them that way in the cellar, but they get *mad*, and that (the mad) gives them the diarrhea, and they besmear everything they can, and then "up and die."—A. B. MASON.

A very short time, indeed—only so long as the pollen gathered, has any honey packed with it in the cells. Pollen is not a food for full-grown bees, but only for infants.—J. E. POND.

I do not think that adult bees can subsist on pollen alone. There is likely to be a little honey wherever there is pollen, and hence the experiment cannot be made conclusive.—G. W. DEMAREE.

Until the pollen is used up that was in the hive when the bees began to eat their brood. When no brood is being reared at the time of the failure of the honey, the bees will starve when the honey is gone, pollen or no pollen.—G. M. DOOLITTLE.

Pollen is not suitable food for full-grown bees—and if there is no honey in the hive, and none can be gathered from flowers, the bees will not live many days—just how long before starvation ensues, will depend upon their activity.—THE EDITOR.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

☞ The French Government is compelling bee-keepers in the Seine and Marne Departments to remove their apiaries from neighboring fields and highways 25 metres, and in Oise Department the distance can be 20 metres, which new order of things compels many bee-keepers to dispose of their bees.

☞ If a cellar has a damp smell, and cannot be thoroughly ventilated, a few trays of charcoal set around on the floor, shelves and ledges will make the air pure and sweet. If a large basketful of charcoal be placed in a damp cellar where milk is kept, the milk will be in no danger of becoming tainted.—*Medical Classics.*

CORRESPONDENCE.

QUEEN-CELLS.

Do Worker-Bees Destroy Queen-Cells ?—Just-Hatched Queens.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

A correspondent writes to me thus : "Lately I have seen it stated that bees never destroy queen-cells until after some queen has stung the embryo queens, after which the workers will remove the dead queens and tear down the cells ; also, that should a young queen emerge from a queen-cell placed in a colony having a fertile queen, she would not be molested until the reigning queen happened to meet her, when the former would be dispatched. Do you find this to be the case ?"

In reply, I will state that I have *not* found such to be the case ; and, further, I stand ready to give the party who claims such to be a fact, $100, if he or she will come into my apiary and demonstrate it, for I would willingly pay that price to know how to introduce a ripe queen-cell or a just-hatched virgin queen to any colony I so desired at the same time I took away a laying queen. Even as good a bee-keeper as Mrs. Harrison cannot do it, if we are to judge from what she writes, when she says :

"In my early days of bee-keeping, I used to read that when forming a nucleus by taking two combs of bees and brood and placing them in an empty hive where I wished the nucleus to stand, I should give them a sealed queen-cell at once. After trying it very many times, they have been invariably destroyed, the bees building queen-cells to suit themselves from the eggs and larvæ which they had."

To say that Mrs. Harrison has jumped at these conclusions, or has not had much experience, is belittling one of our best apiarists—one who stands as high in the ranks of bee-keepers, as a careful, thorough, persistent experimenter, as any of the fraternity. No, this will not do. Bees will destroy queen-cells where no queen is present in the hive to sting the inmates of the cells, as I have learned hundreds of times to my sorrow. I do not say that they will sting the embryo queen, for I have no evidence to that effect ; but I have often opened hives in which I placed queen-cells a few hours before, to find the bees biting away at the cells and dragging out the struggling inmate, if such inmate was far enough advanced to be about ready to hatch.

At times of swarming, when I have had many cells about ready to hatch, when taking them away to prevent after-swarming, I have given as high as a half dozen to a single colony from which I had just taken a queen, and in an hours' time had every cell opened by the workers, the young queens dragged from their cradles, and ruthlessly cast out at the entrance of the hive. There has been no one thing that I have labored on more patiently than I have on this immediate introduction of queen-cells when taking a laying queen from a nucleus, for in it there is much money to the queen-rearer ; yet all of this labor was in vain till I hit on the queen-cell protectors, as I have given in my book, and previously in the different bee-papers. By the use of these, I now put queen-cells in any hive at the same time of taking out the laying queen, and in most cases make a success of it.

TREATMENT OF JUST-HATCHED QUEENS.

As to the just-hatched queen not being molested by the bees until the reigning queen meets her, I find this to be equally as mistaken an idea as was that about the queen-cells. In the past I have often tried to get a young queen into a hive having an old and worn-out queen, in the vain hope that this young queen would supersede the old one.

This was generally done with the cells taken out in trying to stop after-swarms as spoken of above. I would listen until I found a cell in which I could hear a queen gnawing at the lid of the same, when I would take the cell to such a colony, lift the quilt a little, smoke the bees so as to keep them from flying at me, when I would carefully remove the end of the cell or the side from the same, and let the young queen out among the bees.

The very first thing they would do, would be to seize the young, downy thing, and commence to bite her wings and legs, at the same time beginning to draw her out of the hive, the same as they did those which they removed from the cells. I would smoke them until they let go of her, only to have her seized by the next worker which came along.

Sometimes they would run into a cell to get away from their tormenters, for here they could stay with the points of their abdomens sticking out, the bees seeming unable to draw them out or harm them while in the cells. Drone cells are the ones the most often entered, and it is nothing unusual to have young queens stay in such cells half a day at a time, when they are being persecuted by the bees, whether there is any other queen in the hive or not. By so staying, the bees are often obliged to tolerate them (where a queen has been removed) till they are finally accepted.

The above is the same as I find it where I try to introduce a just-hatched queen to a colony from which I have taken a laying queen at the same time I put in the young one. If I try to run such young queens in at the entrance, as some claim they do, the young queen is seized at once and immediately drawn from the hive and cast away, in nine cases out of ten. If she is older, then she is clustered by the bees, or "balled," as it is usually termed.

It may be that my bees are different from others, and need educating, but I suspect that all bees are very much alike ; therefore I repeat what I have said before, that $100 is ready for any one who will demonstrate to me in my own yard, that queen-cells or young queens can be successfully introduced at the time of taking away a laying queen, without any more precaution than inserting the queen-cell or letting the young queen run in. Here is a chance for bee-keepers to earn "an honest penny," and at the same time get a name which will stand high among apiarists for ages to come.

Borodino, N. Y.

PRIZE ESSAY.

Extracted Honey — Where it Comes From, What it is, etc.

Written for the American Bee Journal
BY R. M'KNIGHT.

"Extracted honey" is a modern phrase employed only since the introduction of the honey-extractor. It is generally used by the bee-keepers of America, when referring to honey separated from the comb, in contradistinction to honey in the comb. In Britain, the same article is known as "run honey ;" by the uninitiated it is frequently denominated "strained honey."

Extracted is the purest form in which honey can be procured ; but not the form in which it commands the highest price in the market. There are two or three reasons why comb honey should be more highly esteemed: The first of these is founded in the belief, on the part of many, that only in this condition can it be obtained in absolute purity ; another reason with some people is because a sense of the beautiful, combined with a relish for what is delicious, predominates.

We can admire the man if we cannot commend his extravagance, who, knowing the relative good value of both, prefers to pay a higher price for comb than for extracted honey, for certainly nothing that can be put upon the breakfast table equals a piece of snow-white comb honey in its combination of the beautiful and the good.

Still another reason is found in the greatly different flavor and aroma of comb, as compared with extracted honey. In extracted honey we have the pure nectar flavored with the essential oils of the flowers from which it is gathered, while in comb honey we have added to these, the flavor and aroma of the beeswax that constitutes the honey-comb. It was in this combined form, mainly, that honey was eaten, from when history began until the extractor was introduced. David—the sweet singer of Israel—associated this delicious combination with gold, when extolling the righteous judgments of the Lord. He says, "More to be desired are they than gold; sweeter, also, than honey *and* the honey-comb."

It is not to be wondered at that people are to be found even in this enlightened age, who are willing to pay a premium for the privilege of eating beeswax with their honey. The combination inspires a confidence in its purity, and preserves a flavor peculiar to itself. Notwithstanding a difference in tastes, and the existence of prejudices, the fact remains that extracted honey is honey in its purest and most nutritive form.

When fully ripened, it is a translucent, saccharine fluid, somewhat greater than that of good syrup, with a specific gravity ranging from 1.415 to 1.440. It is a vegetable product, collected by bees from the blossoms of plants. The fluid when first gathered differs from honey, however, in more respects than one; and is denominated "nectar."

Nectar has not as great a specific gravity as cured honey; but the main difference between nectar and honey is, that the sugar in nectar is identical with that derived from the cane or beet-root; while the sugar of honey is similar to that of grape. How this chemical change is brought about, is now pretty well understood. It is an accepted theory that the change is effected by a salivary secretion of the bee, incorporated with and acting upon the nectar, while in the mouth and the honey-sac. Prof. Cook, I believe, holds this theory to be correct. So do most other eminent authorities.

Cheshire in his "Bees and Bee-Keeping," Vol. I, page 236, says: "From what has been already said of the glandular and tongue structure of bees, it is clear that a salivary secretion is added to the gathered nectar, and that this, like the saliva in our own case, converts the cane into grape sugar." The change thus effected in the sugar of nectar is of the greatest importance, because cane-sugar, when unchanged, is indigestible, and, in a measure, poisonous; while grape-sugar or glucose is easily digested and rapidly assimilated.

But few complete analyses of honey have been made, so that its exact chemical compounds are not generally known. Perhaps the best is that of Dr. Brown, which I give here, as copied from page 129, of Blythe's "Foods, their Analysis and Composition:"

COMPOSITION OF HONEY OF VARIOUS COUNTRIES.

	English.	Welsh.	Normandy.	German.	Greek.	Lisbon.	Jamaica.	California.	Mexican.
Water Expelled at 100°	19.10	16.40	15.50	19.11	19.80	18.80	19.46	17.90	18.47
Water Expelled at a much higher Temperature and loss	7.60	6.56	4.95	11.00	7.80	6.66	7.58	8.13	10.03
Levulose	36.60	37.20	36.88	33.14	40.00	37.26	33.19	37.85	35.96
Dextrose	36.50	39.70	42.50	36.58	32.20	34.96	35.21	36.01	38.47
Cane Sugar?	doubtful.					1.20	2.20		doubtful.
Wax, Pollen and insoluble matter	trace.	trace.	trace.	trace.	.05	1.9 nearly	2.10	trace.	trace.
Ash	.15	.14	.17	.17	.15	.14	.26	.11	.07

From the foregoing it will be seen that the proportion of sugar—levulose and dextrose—varies in the honey of different countries to the extent of 11 per cent., Normandy being the richest, and Jamaica the poorest. (Parenthetically, I may be permitted to say, that Canadian honey was not among the samples tested.)

The one given is not an exhaustive analysis however; for in addition to what is given, honey contains minute organic acids, alkaloidal and bitter principles, possibly derived from the pollen; small quantities of mineral matter, and invariably minute quantities of alcohol (Blythe), all of which are included in the two last horizontal columns of the table; but it suffices to show that 75 to 80 per cent. of extracted honey is saccharine matter or sugar.

West India molasses contains but 67 per cent. of cane and fruit sugar combined; treakle, 69 per cent.; golden-syrup, 72 per cent.; and beet-sugar molasses, 47 per cent. Thus we see that good honey contains 8 per cent. more sugar than the best syrup in the market, and nearly twice as much as some of the molasses sold in our grocery-stores.

MANAGEMENT FOR EXTRACTED HONEY.

Having glanced at the source and composition of extracted honey, it will now be in order to say something on its management, passing over the *modus operandi* by which it is procured, as I take it that there are few of my readers unacquainted with this.

If honey be left in the hive until the combs are sealed over before extracting, its subsequent treatment is quite simple. All that will be required to preserve it in good form, will be to keep it in a dry, warm room. If stored in a damp place, and left unsealed, it will deteriorate in quality, from the absorption of moisture for which it has a strong affinity, and will lose much of that ropy consistency which is a characteristic of good honey.

If extracted while yet uncapped or only partially sealed over, it will probably be in what is known as an "unripe" state, and must be cured, else it will be liable to ferment, which greatly impairs its quality, and almost destroys its food value.

RIPENING EXTRACTED HONEY.

The unripeness of honey consists mainly in its holding in suspension an undue proportion of water. The removal or expulsion of this excess of water, constitutes the process of ripening. The simplest and readiest way to effect this, is to heat the honey in a water-bath until the excess of water be driven off in the form of vapor. This treatment is believed by some to impair its aroma, and injure its flavor. My own experience has taught me that there is more importance attached to this notion than it deserves.

It is by means of evaporation—in virtue of which vapor passes imperceptibly from the surface of a liquid when exposed to the air—that the process of curing is generally carried on. The rate at which evaporation takes place, depends upon the temperature. In a low temperature, the air soon reaches the point of saturation, beyond which it is incapable of taking up moisture or holding it in suspension; hence the higher the temperature, and the greater the surface exposed, the more rapid will the evaporation of water from honey be.

Many bee-keepers have devised shallow troughs over which they slowly run their honey to facilitate the work of curing. Whatever the means employed, it should be borne in mind that a high temperature is necessary to rapid ripening.

There is still another method of curing honey, that I have myself practiced with success. This may be denominated the "gravitation" method. It consists in storing honey in deep tanks (mine hold from five to seven hundred pounds each, and are about equal in diameter to that of a large-size extractor-can). If these be placed in a warm room in summer (better still, a glass house), and filled with unripe honey, then covered and left to stand for two or three weeks, it will be found that the water incorporated with the honey will have risen to the surface—the honey and the water forming two stratums as distinct and well defined as that of oil and water in the same vessel.

The honey may then be drawn off through the faucet below, and the water left remaining in the tank, when it will be found to be no sweeter and no denser than the liquid usually employed in making honey-vinegar, and this is the use to which I put it. It may be dipped out or poured off the top of the honey.

On several occasions I have found a body of water on top of the honey as much as three inches deep, and on passing one's finger down through it, the surface of the honey will be palpaable and well defined.

When honey is first extracted, it is in a liquid state, but under ordinary conditions it will in time change to a semi-solid form. It is then known as "candied honey." The length of time that elapses before candying takes place, differs materially in different seasons, and under different circumstances. The slowness with which honey changes from the liquid to the candied form, and the rapidity with which this takes place at other times, may be attributed to the presence or absence of water in quantities favorable or unfavorable to the transformation. So also will the grain be coarse or fine. The less water present, the slower the crystallization, while its entire absence prevents it altogether.

"Grape-sugar," of which honey is mainly composed, combines chemically with water in two proportions—monohydrated glucose ($C_{12}H_{24}O_{12}H_2O$) and bi-hydrated glucose ($C_{12}H_{24}O_{12}2H_2O$); both of these hydrates lose their crystal water at 212° (Johnston). It follows that if honey be heated to the boiling point until its water of crystallization be expelled, the air then excluded and kept excluded by sealing it down, no crystallization *can* take place. This should be borne in mind and acted upon when desirable; by doing so, the bee-keeper will be enabled to supply his customers with liquid honey at any season of the year —spring, summer, autumn or winter.

KEEPING HONEY IN ITS LIQUID FORM.

To preserve honey in its liquid form, then, it is only necessary to expel the water it contains by the application of heat (this is best done in a water-bath), bottling while hot, and hermetically sealing the bottles. The common preserve jars, with their rubber rings and screw tops are admirably adapted for this purpose.

This is no vague theory, but one founded on sound chemical principles, and verified in my own practice and experience. At the International Convention held at Brantford, Ont., I produced a sample of liquid honey of the season of 1888, that had not been candied, and those who tasted it pronounced it excellent.

A neighbor of mine never permits his honey to candy, by treating as above described, and I have known him to receive orders from people a hundred miles from his home, because they get honey from him in its liquid state, while at home they cannot procure it in other than a candied condition.

RETARDING HONEY-GRANULATION.

The careful observer will have noticed that granulation may be retarded by keeping in an uniformly high temperature. I believe if honey be kept at say 90°, it will not crystallize so long as this temperature be maintained. The melting point of glucose-sugar crystals is 86°; cold weather accelerates the candying of honey—this is well known, but little understood. It is not the cold that does it, but the condition of the atmosphere incident to cold. In other words, the point of atmospheric saturation is then low, in which state the air is in a condition favorable to its giving back its moisture to the honey, which has for water a strong affinity.

Let the skeptic who cures his honey by causing it to flow over shallow troughs, or by storing it in shallow tanks, and who refuses to accept this theory, transfer his operations to a cold room, or to the cellar, and he will discover that instead of obtaining cured honey, he will soon have candied honey.

A colorless syrup is sometimes found floating on top of a body of granulated honey. This liquid is almost pure levulose, and its presence is not an evidence of unripeness, but a proof that levulose is present in an undue proportion.

A reference to the analytical table given before, will show that it varies in quantity in various samples of honey. It is in itself uncrystallizable glucose, or from its co-constitutent, dextrose. When it is present in honey in abnormal quantities, a portion of it refuses to combine with the dextrose, and finds its way to the surface, where it floats in the form of the liquid well known to most bee-keepers. At least most of them have had an opportunity of seeing it.

Owen Sound, Ont.

WORKER-CELLS.

What is the Correct Size of Worker-Cells?

Written for the American Bee Journal

BY DR. C. C. MILLER.

I want to begin as I meant to end my last article, by apologizing to Rev. W. P. Faylor for taking him to task as to the measurement of worker-cells when I had not carefully measured them myself. It has been the general thing to speak and write of worker-comb as having five cells to the inch, but if I had looked as carefully as I should, I would have found that at least some of the books are more exact.

But Mr. Cheshire, who is quite minute in calculating the number of cells to the square inch, gives one-fifth of an inch as the diameter of a worker-cell, and I supposed that when he had carefully formulated a table I might rely on it as correct. After I had mailed the article, I happened to find a piece of natural worker-comb, which I measured, and found, as nearly as I could tell, with a common rule, four and four-fifths cells to the inch. I immediately wrote a card to the editor, saying that I must apologize to Mr. Faylor, and giving the results of my measurements, asking the editor to make a postscript to that effect to my article, if the article was not already printed. As it was a private note, not all intended to be printed, I suppose the editor, in the kindness of his heart, wanted to let me down as lightly as possible, and merely gave the results of my measurements. So, under the circumstances, I can only thank the gentleman for replying as courteously as he has.

As to not recognizing his standing, I certainly am at a loss to understand how, but I suspect from the context that it was not in affixing the title "Rev." to his name. Now custom, where I have lived, although it makes an M. D. addressed always as Dr., never as Mr., has the opposite rule with regard to the clergy, and I never heard the Rev. J. Smith addressed as anything else but Mr. Smith, unless he be of the Roman Catholic clergy, when he would be addressed as Father Smith. So it was from no lack of respect that I wrote as I did, although it might be lack of intelligence, for I do not see any sense in making the clergy an exception to the general rule. It seems to me just as appropriate to say "Good morning, Reverend Smith," as to say "Good morning, Doctor Smith," or "General Smith." But all this aside, let us try to get at the truth with regard to the size of cells, for it may be, and I think it is, a matter of very great importance that the cells of foundation be not too small.

If Mr. Root is making cells smaller than the bees make them, I think he himself will be glad to know it, and to correct the error. Indeed, I should feel he were doing me a wrong to sell me foundation for brood-comb having cells less than natural size. Can we find out what is natural size? In my crude way of measuring I do not feel that I could be very accurate, and, indeed, if I am rightly informed, the bees do not always use *exactly* same size.

Prof. Cook quotes Reaumur as giving the diameter of a worker-cell at "two and three-fifth lines or twelfths of an inch." Mr. Cheshire says one-fifth of an inch, or twenty-eight and thirteen-fifteenth cells to the square inch. The revised Langstroth says, "The average number in a square inch is a trifle over twenty-seven." This is probably Dadants' measuring, and as the Dadants are the largest foundation makers in the world, they have probably given the matter close attention. Twenty-seven cells to the square inch makes the diameter of a cell, if I am correct, .213 of an inch. Reducing all to thousandths of an inch for the sake of comparing, we have the diameter of a worker-cell .200 according to Cheshire; .213 according to Dadant; .216 according to Reaumur; and .222 according to Rev. Faylor, if he has 4½ cells to the inch. In his last he has the alternative of 4¾ to the inch, making the diameter .211—too small according to Dadant and Reaumur.

Now to come back to the original point: Rev. Faylor proposed to make foundation 4½ cells to the inch, in which I did not agree, nor do I now. Mr. Doolittle says, "We tried to improve the bee so as to make them take cells 4½ to the inch, but we had to give it up." Rev. Faylor thinks that Mr. Root's "latest foundation machines make the cells as much too small as some of the old ones make the cells too large." But those "old ones" are made 4½ to the inch, just what Rev. Faylor advocated; and which he now says are too large.

Rev. Faylor says, "I should like to know who, besides Mr. Root, as a foundation-machine builder, advocates 5 cells to the inch." *Does* Mr. Root advocate this? Mr. Editor, can you tell us what his foundation measures?*

Rev. Faylor says, "The Vandervort machine makes 4½ to the inch, horizontally, and 5 cells diagonally, which would average 4¾ cells to the inch." That is something new again, and I must thank Rev. Faylor for calling my attention to it. I always supposed that foundation was made to measure the same each way, but I find on measuring (I do not know what machine it is made on) that the cells are larger horizontally than diagonally. I found 4.94 cells to the inch diagonally, and 4.8 horizontally. Do the bees make it so, or is that to allow for sagging?

SPACING COMBS.

I space my combs 1⅜ inches from center to center, but I do not pretend to really *know* what is right. Rev. Faylor advises 1½ inches, and on the very next page J. E. Pond strongly advises close spacing, which I understand from his former writings to be one and three-sixteenths. As the latter desires to "start a discussion," we might all learn something if these two gentlemen would bring out the points on both sides. For one, I should like to know what spacing is best.

Marengo, Ills.

[*No. We have not seen any comb foundation of Mr. Root's make for several years.—Ed.]

BEE-ESCAPES.

Some Improvements and Further Experiments Considered.

Written for the American Bee Journal

BY C. H. DIBBERN.

Some may wonder why I did not reply sooner to the article of Mr. Reese, published on page 294. One reason is, that I have been very busy establishing an out-apiary, building a honey-house, making up 300 hives, and 500 supers, besides all the other very necessary work connected with an apiary of 240 colonies. Besides, I do not like personal controversies, and as Mr. R. concedes to me the invention of the horizontal bee-escape, there need be none.

Now, as to placing the horizontal escape inside the board (which Mr. R. claims as his improvement) is but of minor importance. I would like to ask Mr. R., however, if the first diagram sent him about Nov. 18, 1889, was not a horizontal escape; and if it was not placed inside the space occupied by the board. In answer to this, I have his letter of Nov. 23, 1889, in which he says that he never thought of placing the escape in that way. This letter shows Mr. Reese's own drawing of my board, and it will certainly be pretty hard to get around that.

Just now, I am more interested in making the horizontal escape an entire success than in quarrelling over priority of making some trivial improvements.

Since warm weather has come, I have experimented a good deal with about all the escapes brought out during the past six months. Now, to be candid, I believe that all are more or less defective, including my own four-point escape.

Most of them will work all right when placed over an empty super, or wherever the old-style Reese escape would work. They will prove unsatisfactory, however, if placed directly over a strong colony, or between extracting combs and the main hive. When thus placed, it is a fact that bees will fill the escapes full, and seem to be able to conduct other bees directly through the escapes both ways. The bees, of course, will continue to occupy the super. The same thing happens when they cluster on the cone of the old Reese escape.

I have also noticed where bees cluster on the apex of the tent escape, or at the escape on the windows of the honey-house, when many bees have been carried in, robbing is speedily started. It will not do to make the outlets so small that workers can barely get through, as drones would get clogged, and die there. All these difficulties have set me to thinking, and further experimenting.

I soon made some important discoveries, and now I have an entirely new escape, that works like a charm. Yes, sir; the horizontal bee-escape is a perfect success, and, in my opinion, is the only practicable one. With this new escape, I have cleaned the bees out of hives that were used as upper stories, and in which they were storing honey, in just two hours. It cleans out every bee! In making many tests, I have never failed, and I am confident that I now have the escape that *will fill the bill.*

Mr. Reese says that he has been ever anxious to give bee-keepers an escape that can be made for next to nothing. Bee-keepers are not generally paupers, and I believe they are willing to pay a reasonable price for a good, well-made escape that will do the business.

BEES UNCAPPING THE HONEY.

Some one has advanced the idea in opposition to bee-escapes, that the bees in leaving will uncap cells, and fill themselves with honey. I have used bee-escapes of all kinds during the past year or two, and I never saw a case of that kind. It is all bosh. They do nothing of the kind. Let no one get discouraged because some of the early forms of escapes are not entirely satisfactory. The horizontal escape has come to stay, and will be a valuable acquisition to bee-keepers.

Milan, Ills.

BEE-FORAGE.

Virgil's Knowledge of Bees Compared with Modern Ideas.

Read at the Ohio State Convention

BY S. F. NEWMAN.

For more than 1,900 years, this subject has engaged the attention of men interested in apiculture. Such men as Virgil, editor of the "Georgics;" Thomas G. Newman, editor of the AMERICAN BEE JOURNAL; A. I. Root, editor of *Gleanings;* and many other lesser lights have written much and exhaustively upon this subject. In fact, it has been discussed, re-discussed, and essayed at nearly every convention of bee-keepers, county, State and National, held during the last 20 or 25 years, and yet, I suppose, it is expected that I will present something *new* at this time, pertaining to this subject.

"There is nothing new under the sun." In proof of this statement, so far as bee-keeping is concerned, I will be pardoned if I digress a little.

SOME ANCIENT BEE-LORE.

In the year 70, Virgil gave minute directions as to the care of bees, showing a very accurate knowledge of their habits, and of the economy of the hive. He told how to select a suitable site for the location of an apiary; how to make hives; how to prevent loss from drowning in early spring-time; how to prevent loss of swarms; how to cure diseases to which bees were *then* and are *now* subject; how to take off surplus honey; how to secure a good crop of honey; how to winter bees successfully; and, I think, there has been but little improvement in many of these matters since the days of Virgil.

Virgil says: "Apiaries must be placed where winds do not have access, for winds do hinder bees in carrying home their food." Our modern bee-masters give the same advice. They say, "Surround your apiaries with high board-fences and hedges, to protect them from wintry blasts, and the chilling winds of spring."

Virgil says: "Compact your hives of hollow bark or cork wood, and let the inlets be narrow to keep out the winter's cold and summer's heat, for winter congeals the honey with its cold, and summer dissolves it with its heat." Our modern bee-keepers say: "Place a chaff division-board on each side of the cluster, and a chaff cushion above it, to absorb the moisture, and keep the cluster warm." In my opinion, the ancient plan was by far the most sensible, and the least troublesome. The bark or cork-wood hive absorbed the moisture and kept the bees warm, and the bee-keeper did not then, as now, have to make an extra building in which to store his chaff cushions, chaff division-boards and other "traps."

The ancient poet says: "Place your hives by cool springs fringed around with moss, and whither the water runs swiftly, or is quiet, throw in willows or rocks so that the bees may have bridges to rest upon, and spread their wings to the summer sun when the east wind has immersed them in the flood." Our modern bee-keepers say: "Place fish-kegs filled with water on which float little chips, on which the bees can rest in the warm sun, and dry their wings if, perchance, they may have accidentally slipped off the little chips and wet themselves."

Some of us practice what many think is a modern device—clipping the queen's wings to prevent swarms from absconding. The ancients did the same, although not quite as artistically as we do it. Virgil says that when the swarms fly about and sport in air, and despise their hive, they must be restrained from their vain play. *Nec magnus prohibere labor: Ter regibus alas eripe*—and not one will dare, while the kings stay behind, to fly aloft.

Mr. A. I. Root says: Having a pair of silver-steel scissors, catch the queen, hold her carefully between the thumb and forefinger of your left hand, and with the sharp scissors in the right hand, clip off about one-quarter of her wings; place her back in the hive, and you will have no trouble with runaway swarms.

Again, Virgil says: "When you intend to rob the busy workers, of their treasures, bear in your hand the searching smoke, for at such times the bees are wrathful, and, when provoked, breathe venom into their stings, and leave the hidden dart fixed into the veins, and lay down their lives in the act." Our modern supply dealer would say: "Buy one of my double-acting, patented smokers, that will throw a stream of smoke at least ten feet ahead of you, and you can take off surplus honey all day, and not get stung once; the bees will run when they see you coming!" I do not know whether or not Virgil ever invented or patented a smoker—he does not tell us; but he certainly understood the effectiveness of smoke in preventing bees from stinging.

He tells us also how to cure the dire diseases to which bees were subject: "Mix their honey with the juice of pounded galls; boil roots of herbs in fragrant wine, and present it as food in full baskets at their door." No doubt from the medicine given, galls, which are a powerful stringent, Virgil's bees were afflicted with the diarrhea, the same as ours. He knew how to cure it: we do not.

HONEY-PLANTS OF THE ANCIENTS.

Now I come to the subject of my essay, and I find by reading the fourth book of the "Georgics," that Virgil was pretty well posted as to bee-forage. He tells us of an old man, a Corycian, who lived in the southern part of Italy, and took a good deal of interest in bees.

This old man owned a farm which had been much neglected, with soil too poor to plow, not proper for flocks, or commodious for vines, and so the old man planted his farm with lilies, and esculent poppies, and various other honey-plants. I doubt not that he had among his plants sweet clover, about which so much has been said and written now-a-days. Certainly he had the right kind of land on which to grow sweet clover, if what our seedmen—those who have sweet clover seed to sell—tell us is true.

As a result of this old Corycian's planting for honey, we learn that he was the first "to stream the frothy honey from the pressed combs." He had in his collection of honey-plants the lime-tree, which is our linden, and is the best honey-plant in the world—about the only one, in my estimation, which pays to plant for honey alone.

Fruit growers can learn a very important lesson from this poem of Virgil's. This Corycian had fruit-trees in great abundance, and Virgil tells us "that as many fruits as the fertile tree had been clothed with in early blossoms, so many it retained ripe in autumn," *i. e.*, on account of the worth of the bees in fertilizing the flowers, every blossom produced perfect fruit. The only object nature has in the secretion of honey, is to attract bees and other insects to the flowers, in order that they may be fertilized.

In our part of Ohio (Huron county), our sources of honey and pollen are the maples, elms and willows during March and April; fruit-blossoms during May, white and Alsike clover during the month of June, and basswood for the first half of July. Of course, we do not have a continuous flow of honey during the months mentioned. It is about two weeks from the time the maples cease to bloom, to the opening of fruit-blossoms; and two weeks from the time fruit-blossoms cease to produce honey to the time of the clover bloom. From the middle of March to the first of June there is at least one month during which bees have little or no forage, and much of the time when forage is abundant, from the middle of March to the first of June, the weather is so unfavorable that bees can do but little.

I think that under favorable conditions, apple-blossoms yield more honey than the blossoms of any other plant; but those conditions seldom occur—only once during the last 15 years have we been favored in Huron county with weather during the time apple-trees were in bloom, that seemed to be the best possible for the secreting and gathering of honey. That year my strong colonies gained not less than 25 pounds each in six days, and one gained 10 pounds in one day, and 40 pounds in six days.

About ten years ago, after I had taken off my surplus honey, about the middle of July, and arranged the hives to secure what little honey might be gathered after that time, I gave no attention to my bees for about two weeks, but on examining a few hives at that time, I was very much surprised to find them completely filled, as I knew of no source from which much honey could be gathered at that season of the year, and I extracted nearly a thousand pounds of honey of the very best quality. There has never been a repetition of such work at that time of the year, at my home apiary.

The next year I moved some 40 colonies four miles south of my home apiary, and every year since that time the colonies I moved have done much better than those at home, during the latter part of July and the month of August. They always come in well on the "home stretch."

On examining the pasture around that apiary, I found that the honey gathered during the latter part of July and the month of August, was secreted by the mammoth or pea-vine clover, of which there was a great abundance in that vicinity. That clover always yields honey—it never fails. During the months of July and August of the year 1888, I had several colonies that gathered from 140 to 150 pounds each, of honey of the very finest quality from that source. Mr. Ernest Root and Mr. Boardman saw some of the honey, and will confirm what I have said as to its quality.

PEA-VINE CLOVER AS A HONEY-PLANT.

I have more confidence in mammoth clover than any other plant that grows, and I believe that it is going to prove itself a very important factor in solving this problem of bee-forage. It blooms at the time of the year which is most favorable in every respect. The weather is generally fine, the bees have finished swarming, the old colonies have their new queens, and are well stocked with bees, and they all get right down to hard work, and seem to think of nothing except to store as much honey as possible.

This clover is planted with us as a fertilizer, and for the production of seed. The stalk is very long and coarse, and is not much used for hay. When a crop of seed is be obtained from it, it is generally pastured until about June 20, and then left to grow up and go to seed; so you see that it is ready for the bees about the time basswood ceases to yield. Localities that are favored with this and the other clovers and basswood, will have a continuous bloom of honey-producing plants from the first of June to nearly the last of August.

Our surplus crop of honey in Huron county is usually obtained from fruit-blossoms, such clovers as are raised by farmers generally, basswood and buckwheat. The other plants mentioned, and golden-rod, while they give us no surplus honey, help to keep up brood-rearing, and to keep our bees out of mischief.

In conclusion, I would advise that, for every basswood or whitewood tree cut in your vicinity, be sure that another is planted by the roadside or in some other place convenient to your apiary, to take the place of the one removed. Induce farmers, as far as possible, to raise the mammoth clover, and to pasture it until June 20. Give the farmers all the buckwheat they will sow, on condition that they return you the seed given them; or, which is better, if possible, move your bees as soon as the clover ceases to yield honey, where they will have access to one or two hundred acres of buckwheat. Teach your bees, when they are gathering honey from sweet clover, to carry a few seeds with them on their return home, and drop them by the roadside or along the banks of some river or creek, or in some other convenient place. Sweet clover is a nice, clean, sweet plant, does not give any one the hay-fever, as the rag-weed does, and is much more ornamental, and ought in some way to be made to take the place of all the rag-weed in the country. If you cannot teach your bees to scatter the seed, get it done in some other way.

I learned, a few years ago, that there was considerable sweet clover by the roadside about two miles from my place (Norwalk), and that gradually, but very slowly, it was coming nearer. All at once it took a sudden start, and in one year it covered the intervening space, and even went beyond where my apiary was located.

Give alfalfa a thorough trial. If it will grow in Wisconsin, it will grow in Ohio. Do not get discouraged; if you fail this year, let it be no fault of yours, and hope for better results next year. "Hope on, hope ever." We will certainly "get there" in some way.

If you failed last year, and the year before, *hope* that you will not fail this year, and if you do, keep on hoping, remembering that our business is ennobling and elevating—it makes us better men and better women—it leads our thoughts "from nature up to nature's God;" that we get much enjoyment in the study and pursuit of it, and that we were placed in this world, not for the purpose of making money only, but to enjoy ourselves, and in every way possible to help others to enjoy themselves, and to make the world better for our having lived in it.

My father was a great lover of bees. I love to work with bees, and expect to do so as long as I live, whether I make money by it or not.

Norwalk, Ohio.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Unfavorable Season for Bees.

The season so far has been very unfavorable for the bees; they did not gather any honey from the fruit-blossoms, owing to the cold weather, but from the maple and box-elder they did well for a few days. Some of the strongest colonies built new comb and stored some honey, but for the last month it has been a hard time for those that had but little old honey in the hive; many of them had to be fed, and those bee-keepers that have not watched the bees closely, have lost many colonies. There have been a few swarms, but they were those that when set out had a small lot of bees and a hive full of honey. For the last few days many of the colonies have been killing off the drones, but the prospect now looks a little better, as the raspberries and white clover are beginning to bloom. Yesterday was a fine day, and the bees improved it, but to-day it has rained again all day, so that the bees could not leave the hives; but we still look for better weather, and trust that the little workers will make a favorable report for the season yet. WM. DYER.

Hastings, Minn., June 17, 1890.

Poor Prospects—Swarming.

The prospects are very slim for a full crop of honey this season. I put into winter quarters 32 colonies of bees, and all came out alive this spring. The winter was so mild that they were out a good deal all winter, consequently they used up all their stores, and it was so wet and cold all through the month of May, that they hardly stored honey enough to live. I have no swarms so far. There is a good deal of white clover, but I have not seen a bee at work on it yet. There was but little apple-bloom in these parts. Last season my bees cast most of their swarms before this time—I had 14 colonies. I would like to know, first, if bees ever cast a swarm before they have drones; and second, whether bees gather pollen when they are queenless.

R. B. WHEATON.

Middlebury, Conn., June 14, 1890.

Discouraging Prospects.

So far the bee-keepers' prospects for 1890, in this vicinity, have been most discouraging, and I am very much afraid that our honey crop this year will be a total failure. S. F. NEWMAN.

Norwalk, Ohio, June 6, 1890.

Dead Brood in the Hives.

I have 36 colonies of bees that I thought were all in good condition; I have been watching for swarms, but all in vain so far. I have examined some colonies, and found dead brood—from 3 to 5 combs nearly full, capped over, and the inmates nearly full grown, but are soft and milky. Some few are matured, and are crawling out. Drones are in some, and a good many bees, yet no freshly laid eggs, as there is no place for depositing them. H. DIERDORFF.

Franklin Grove, Ills., June 17, 1890.

Swarming and Gathering Honey

Bees are swarming lively, and honey is coming in very fast. White clover is splendid here, and we are having plenty of nice showers of rain to keep it so. I will start the extractor to-morrow. I packed 69 colonies last fall, and lost none.

BYRON IIAMS.

Worcester, Mo., June 18, 1890.

Large or Small Hives.

In reply to Mr. John A. King's letter on page 316, I would say that the hive he describes, and asks if I ever saw a much larger hive, I would call a small brood-chamber with a large storage capacity for the reception of surplus honey. Does Mr. King claim this sized brood-chamber sufficiently large for a prolific queen? If I have not learned the object lesson that Mr. King speaks of, I have learned that the size of brood-chamber he speaks of is a total failure in my locality. I have tried considerably larger brood-chambers than he describes, and they stand waiting for a purchaser at half their cost. Some of our best authorities say that a hive should contain from 25 to 30 pounds of honey for safe wintering. How Mr. M. L. Barney (see page 311), with his Badger State hive of only 853 cubic inches, can succeed without resorting to the sugar-barrel, is beyond my imagination. I find that such a hive, if stored full of honey, would contain about the above amount, or a very small trifle more. Is not the queen pretty tightly laced in such a hive?

It seems at the present time that there is a craze among some bee-keepers that the smaller they get their brood-chambers, the greater their success will be; but practice with me has proven to the contrary, and I notice that the practical bee-keepers are falling into the same rank. From Mr. Allen Latham's language, I should judge him to be one of J. W. Hosmer's disciples, who vindicated a very small family of bees for successful wintering; but this theory never came into general practice; and I believe that the time is not far distant when small brood-chambers will occupy the same position as Mr. Hosmer's theory.

East Liverpool, O. A. J. FISHER.

Something to be Proud of.

The AMERICAN BEE JOURNAL is just the nicest, cleanest publication printed, and you have a right to be proud of it.

J. E. BREED.

Embarrass, Wis., June 7, 1890.

Hives for Comb Honey.

Will you please let it be stated in the AMERICAN BEE JOURNAL the different styles of hives invented and now in use? I have one that I have given the name of "The Great Alliance Hive." I do not think I have stepped on any one's toes. It is the best I know of for the production of comb honey. Is it always best for one to go in person to Washington, D. C., to secure a patent? R. H. CAMPBELL.

Morgan Co., Ga.

[Of the hives invented, their name is "legion." Of those now in general use, the Langstroth, Gallup, Quinby, and perhaps 2 or 3 others, are all that can be enumerated. It is not necessary to go to Washington to get a patent—neither is it generally desirable. The usual delays make a personal visit too expensive.—ED.]

The Season in West Virginia.

My bees are doing tolerably well now. The spring has been very unfavorable. There have been 2 swarms so far, the first coming out on May 17. White clover is abundant, and has been in bloom one month to-day. Bees in this part of the country are all wintered on the summer stands. The greatest drawback here is the cold, wet weather that we usually have during May and June. The last year was really remarkable in this respect, for June, 1889, was far more inclement than was January of the present year. Many bees died in this region the past winter—many losing all they had. Seven per cent. of mine "went the way of all the earth." I think strongly of changing my apiary entirely to the production of extracted honey. True, it does not sell so well in my local market, but then this market cannot consume one-half of my honey.

M. A. KELLEY.

Milton, W. Va., June 2, 1890.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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HONEY AND BEESWAX MARKET.

NEW YORK, June 5.—There is no comb honey on the market, but a small stock of basswood extracted and California: new Southern extracted is arriving, but the quality is mostly inferior. We quote: Extracted basswood and California, 7c; Southern, 65@70c per gallon. Beeswax, scarce at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 19.—We received to-day the first shipment of new comb honey from Independence, Mo.—nice white 1-pound sections, put up in handsome white crates holding 12 sections each. It sells at 15@16c per pound. Extracted, white, 5@6c; dark, 5c. Beeswax, 25c.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, June 5.—Demand is now very light for comb honey, and will be for the ensuing two months. There is not much on the market, and very little of it is in desirable shape for the retail trade, being in supers and just as removed from the hive. Best brings 13@14c, and off-grades about 10c. Extracted, 6@8c. Beeswax, yellow, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, June 3.—Best white comb honey, 13@14c; other grades, 10@13c. Extracted, slow demand at 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, June 19.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, June 10.—Demand for comb honey is slow, and prices nominal. There is but little on the market. Extracted honey is in good demand at 5@8c, according to quality. We bought to-day the first 4,000 pounds of new extracted clover honey.

Beeswax is in good demand at 24@28c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

☞ If any one wants a club of two or more weekly or monthly periodicals, besides one or both of our Journals—send us a Postal Card, and we will then quote the lowest possible price, by return mail. The number is too great to enumerate.

* * *

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

CATARRH.
CATARRHAL DEAFNESS—HAY FEVER.
A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

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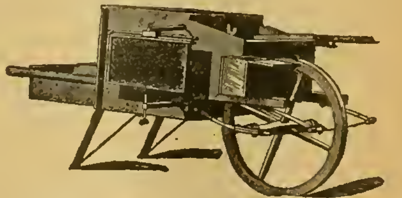

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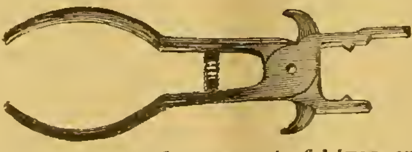

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14Etf

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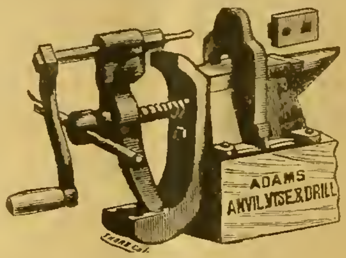

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22Etf

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We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

Mention the American Bee Journal.

The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Samples, 5c., and money returned if they are not extra nice. Untested Queens, $1.00; six for $5.00. Tested (at least 3 bands), $2.00; Selected, tested (4 bands) $3; Breeding Queens (4 to 5 bands), $6.00. Virgin Queens, 50 cents; 5 for $2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**

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1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI July 5, 1890. No. 27.

EDITORIAL BUZZINGS.

☞ Select a few combs of well-sealed honey for winter stores, and take it from your good, white honey.

The Golden-Rod.—New York, by vote of its public schools, selected the golden-rod for its State flower last May.—

Prospects for a Large Yield, in some places, are very good—but in many others they are not so good. Of the former, this is a representative report:

> Bees in this part of the State are doing finely, and the prospect for a large honey-yield is very flattering. The season is at least two weeks ahead of last year.
> CHAS. T. HENDERSON.
> Lebanon, Ind., June 27, 1890.

Of the latter, the following letter will express the experience of many :

> Bees have very suddenly come to a stand-still in honey gathering. While we have a heavy bloom of white clover, and our hives are full of bees, I cannot see a bee to-day where I saw a hundred a few days ago, and they are idle at the entrance of the hive ! So much for expectations ! They have been doing reasonably well until the last three or four days.
>
> We have been having a good deal of rain of late, but they seemed to be doing well between showers. We had a very heavy shower on the 21st inst. Since then we have had none;—the mercury every day running above 90 degrees, and it has put a quietus on the honey gathering. How long it will last remains, yet to be seen.
> J. C. ARMSTRONG.
> Bromley, Iowa, June 27, 1890.

It is too early to give anything satisfactory as to the prospect for a honey crop. Basswood promises well, but it is difficult to even "guess" now what we shall *know* in a few days more. If the demand for supplies means anything, it ought to be the largest crop for many years.

Brother Root, in the last issue of *Gleanings*, gives a statement of the sad condition of things in the supply department of his establishment—on account of the great and "unexpected rush for goods." A correspondent says some very severe things concerning Mr. Root and his clerks and managers. The correspondent was no doubt quite justified when he charged that "a base deception" had been played on him, when promising that the goods should be shipped the next day—when it was confessed that they were not shipped for seven days after that day.

This brought Brother Root up standing. He was astonished—bewildered—confounded ! "John," his son-in-law, who took charge of all orders, was home sick for two weeks with a sprained ankle. Ernest stepped into the breach, and relying upon the promises of others, said that the goods should be shipped the next day. Every one who knows Ernest will say that he *intended* to do as he agreed—but, alas, it is too often the case, that errors come even when the best efforts are made to prevent them—and in the present rush who can prevent mistakes, errors and delays ? No one ! !

We have complaints on our desk against four different supply dealers. One of the complainants is so very much wrought up against one of the largest and most prompt supply dealers of America, that he wants to pay for an advertisement in the BEE JOURNAL to state his grievance, and warn others against doing business with him.

We *know* that the one complained of is doing all he can to fill orders, and is running his factory day and night to try to satisfy his customers, but he is hopelessly behind.

Here, in our supply house, we are in a very similar condition. Some things we cannot supply promptly, particularly the Sections, on which we are nearly 400,000 behind our orders. We are getting all we can *daily*, and ship them instantly, as soon as they come from the factory. One of our customers, who had an order for sections *and other goods* waiting, complained bitterly because a neighbor sent for foundation and received his goods the next day. He forgot that his order was all held for the Sections, which must take its turn, and was sent as soon as that *turn* came.

When the honey is going to waste because proper receptacles are not at hand, it is hard for bee-keepers to be patient—and we do not blame them except for not ordering earlier, and getting everything needed ready for use before the honey season commenced—as we have so often advised.

Now, orders are coming by telegraph, for Sections, etc., to be sent by express *at once*. We are very sorry to have these good people disappointed, but it is inevitable. Everything in stock we ship promptly and pride ourselves in doing it, but when we depend on others for stock not on hand, we are at their mercy.

If there is any consolation in the fact that all supply dealers are in the same condition, that consolation may be administered —"for misery loves company." If any one cannot wait their turn, let them call for the return of their money—here, at least, it will be instantly returned, and that solution of the difficulty will be most welcome to us, for it will be a great relief not to feel compelled to further disappoint our friends —after having done all we could to accommodate them.

The Lewis fire, just at the beginning of the season, has crippled all supply dealers, and, in a great measure, is responsible for many of the delays.

Do Not Send samples of the so called "foul brood," or any diseased bees through the mails. It is very dangerous, and there is no excuse for doing it. Postal clerks and others handling it may be careless, and much damage may result. We fully endorse the following from *Gleanings* of June 15 :

> Please do not send any suspicious comb through the mails, or in any other way. Let all the bee-papers echo the request. If you are afraid it is in your hives, examine the description in our text-books ; then if you are not satisfied, state the matter plainly ; write to us or some other competent authority. Meanwhile take every precaution against spreading. It should be treated like scarlet fever, yellow fever, cholera, etc. Stamp it out of existence ; and by no manner of means give a chance of spreading it by your own thoughtlessness or foolishness.

☞ N. N. Betsinger, a bee-keeper of note at Marcellus, N. Y., has just been sentenced to 15 years in the State's Prison, for immorality. He was a prominent citizen, a preacher, and a leader in the church. A Marcellus paper reports the matter thus :

> ——Against Mr. Nicholas N. Betsinger, of Marcellus, the Grand Jury reported 4 indictments under seal—2 for abduction and 2 for rape. He was brought into court in the afternoon, and through his counsel, ex-District Attorney Lawrence T. Jones, pleaded not guilty, with the privilege of moving to set aside the indictment.

He was afterwards tried and condemned, and is now endeavoring to get a new trial. If guilty, he certainly deserves the sentence—for ruining two orphan girls (9 and 13 years of age) is no small crime, especially for one who so ostentatiously paraded his religion at all times. When the girls escaped to a neighbor's house, and told their "tale of woe," indignation ran high, and it was all the police could do to save his life. They destroyed his honey-house and injured some other buildings.

The Honey Almanac is just the thing to use to sell your new honey, as soon as it is taken from the hives. Just order some printed, stating your crop of *new honey* is ready for delivery. It will go like hot cakes ! See prices on page 437.

GLEAMS OF NEWS.

Bees and the Mexican Indians.—M. T. Vanderpool, in the *Youth's Companion*, lately gave the following account of the bees in Mexico, as related by an Indian boy :

> The country traversed was much the same as on the previous day, groves of noble timber alternating with tracks of open grassy country. Shortly after noon we crossed an elevated ridge of dry, stony soil, where all the hillocks and knolls were crowned with very thorny cactus, of the variety known as the candelabra, with branched clumsy arms often reaching a height of eight feet.
>
> Shortly afterward Pablo came riding up to report to us that the band of Indians was following on our trail. I sent another of the Gauchos back to observe their movements, and took the boy into the cart.
>
> His talk, in an odd mingling of Spanish and the native Indian tongue, was very interesting. After he had told what he knew about the Indians, we questioned him about the bees which we saw, whose ways were entirely new to Mellen and myself.
>
> "This bee builds its nests upon the ground and upon flat stones, senores," he said, "and it is called the *alpa-millsqui*." We presently got out of him that *millsqui* is the word for honey. We asked him how the honey was collected.
>
> "With a little hollow reed, senores," said he. He illustrated the process, jumping down from the cart and cutting a grass stalk which he quickly converted into a hollow tube about a foot in length. Then, with a sharpened stick he punctured a hole in one of the honey-combs. Introducing the end of the little tube, he proceeded to suck up the honey into his mouth.
>
> "*Bueno !*" he exclaimed, smacking his lips, "it is *cyrobana*." He meant a kind of honey, collected from a very sweet flower in the Chaco, called the *ybirapayc*.
>
> "But, Pablo," said Mellen, "that does very well for you, but if you were collecting it for me, it would not be quite nice."
>
> "Ah, but I would not take it in my mouth, senor !" cried the bright lad. "I would use a larger, longer reed, and only draw it up into the reed, then blow it into a dish."
>
> He pointed out another bees' nest to us, consisting of a pear-shaped mass of cells, attached to the trunk of a large tree, the bark of which is used for tanning hides. This bee Pablo called a *mozo-mozo*, pronouncing the word in a low tone, in imitation of the hum of the insect.
>
> A few moments later he showed us still another larger bee which he called *toisimi*, "the best bee," he said, "of all those in the Chaco." This bee lays up large stores of honey, making use of a particular kind of cactus, called the *cardon*, as a hive. The cardon cactus has a very thick trunk, generally hollow, often a foot or more in diameter. Inside these drum-like cavities the *toisimi* places its hoard of sweets.
>
> At about two o'clock we halted near a clump of three short, clumsy cacti to rest the animals and take lunch. Mellen and Metorras came back and joined us as we were feasting upon honey and parched corn beside the covered cart.

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

The Aims and Objects of bee-keepers' societies are thus set forth by Mr. C. N. Wilson, in the *Rural Californian*. He strongly advocates the maintenance of such societies, and shows that it is to the advantage of all honey-producers to aid them in every possible way. He says :

> There is a large field to occupy, and a growing industry to build up and perpetuate. Now, let us organize, get well acquainted, and when our honey is ready for market, do the work in a good, business-like manner. There is an impression abroad that 1890 is to be an exceptionally good year, and we can say that an unusually large number of persons have begun the business this season. Most of them are anxious to get what information they can as to the business, and a good association can help them very materially in many ways. One of the principal things to be considered is the proper disposal of the honey after it is produced. Serious hurt is done to the industry by inexperienced persons trying to sell their honey on a poor market, or in poor condition. An association can get and give information on these two points alone that would repay any trouble or expense that would be incurred in its information.

Doolittle's Book on Queen-Rearing has received many encomiums, but perhaps none of them have been more well-put and enthusiastic than the following, which, though written as a "private" letter, he will, we think, excuse the liberty we take of printing here. It is from Mr. Joseph G. Steer, of Tacoma, O. He says :

> Mr. Doolittle has conferred upon us the greatest boon since the advent of the frame hive, in his book on Queen-Rearing. I have long been his disciple, but his latest grand discovery has quite taken us off our feet. I read his book, and at once pronounced it "fiction," which gave me pain, but I thought better of it, and said that I would see. I began, and with the book before me, I endeavored not to omit a detail. I had proceeded so far as to get hatched queens in the upper story of 5 colonies out of 7 that I tried (the other 2 are not yet hatched), when I felt that I could not wait to see the end, to speak of the gratitude I feel toward him, for all that he has done for us, and to offer a sincere apology for the wrong I did him in my heart. Doubtless he has received thousands of letters, thanking and congratulating him, and I am afraid that mine comes a little late. Why, to say nothing of the grand process of queen-rearing he has given us, let me say that it is worth many times the cost of the work to be saved the torment of angry bees from queenless colonies—a point which has never been mentioned of the book.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, post-paid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

☞ Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

Our Advertisers Speak from Experience.

The following are a few of the many unsolicited words of Appreciation from those who have TESTED the Bee Journal for advertising:

An order from Algeria, Africa, says our address was obtained from the BEE JOURNAL.—H. K. & F. B. THURBER, N. Y.

Our Advertisement in the BEE JOURNAL is the best investment we ever made.—J. OATMAN & CO., Dundee, Ills.

Good Medium.—The BEE JOURNAL is a good advertising medium, and the charges are reasonable.—T. J. WARD, St. Mary's, Ind.

Quick Returns.—I get the quickest return from an advertisement inserted in the AMERICAN BEE JOURNAL of any paper I ever advertised in.—HENRY ALLEY, Mass.

Pays Well.—I thought I had Queens enough on hand to safely advertise to "supply all orders by return mail," but as soon as I advertised in the BEE JOURNAL, I not only sold all I had on hand, but orders came in faster than I could *rear* them. The money invested in that advertisement paid me better than any I ever invested in anything else.—I. R. GOOD, Nappanee, Ind.

The Bee Journal does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.—W. M. Rogers, Shelbyville, Ky.

Having advertised in the AMERICAN BEE JOURNAL quite extensively for years, I would say (without solicitation) that it sold more queens for me than any other three papers I have ever tried.—L. J. Diehl, Butler, Ind.

I am much pleased with the result of my advertisement in the AMERICAN BEE JOURNAL. I have sold out completely, and sent back about $50 for which I had no goods to send.—M. P. Cady, Poy Sippi, Wis.

I now have all the orders I can fill this season. Most of my customers say that they saw my advertisement in the AMERICAN BEE JOURNAL.—H. G. Frame, North Manchester, Ind.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

☞ The July number of "The National Magazine," of Chicago, opens with an article entitled "Harvard University and Reform," by Chancellor Harkins, of the National University of Chicago, in which wisdom of President's Eliot's radical recommendations is forcibly maintained.

QUERIES & REPLIES.

Making the Wood-zinc Queen-Excluding Honey-Boards.

Written for the American Bee Journal

Query 715.—1. What wood do you consider the best for rims of wood-zinc queen-excluders? 2. How should the corners of the rims be joined, to obtain the greatest strength? 3. In your opinion, is the break-joint feature worth retaining?—New York.

1. Pine or whitewood. 3. It is.—Mrs. L. Harrison.

Here, again, I am "left." Ask Dr. Tinker. —J. M. Hambaugh.

1. We use slatted honey-boards with zinc. 3. I think so.—A. J. Cook.

1. Whitewood or basswood. 2. I simply nail them together. 3. Yes.—R. L. Taylor.

1. I have had no experience. 2. Dovetailed. 3. With the wood-zinc honey-board, no.—A. B. Mason.

1. Anything light and tough. 2. Nailed. 3. I hardly know.—Eugene Secor.

1. Pine is good. 2. Halving together works well. 3. I do not use it.—G. M. Doolittle

1. Good pine will answer as well as any. 2. Nail them well at the corners. 3. No.—C. H. Dibbern.

1 and 2. I have had but little experience. 3. I doubt the value of the break-joint feature.—C. C. Miller.

1. Pine is the best I have used. 2. Toeing and grooved with saws and driven together makes a very strong corner. 3. I am using honey-boards with and without the break-joint feature, and can see no difference.—H. D. Cutting.

1. What in the West is usually poplar. 2. That depends on the width and thickness of the stuff used. As good a way as any is to let the end-pieces lap over the ends of the side-pieces, or *vice versa*, and nail with long and slender wire nails.—M. Mahin.

1 and 2. I have not had sufficient experience to make my opinion of any value. 3. I do not think that the "break-joint feature" is of any particular value. The question, however, it is but fair to say, is mooted, and some think it of great value.—J. E. Pond.

1. The wood known in this locality as hickory poplar is the best. It is a variety of the whitewood or tulip tree. 2. By dovetailing. 3. In my wood-zinc queen-excluders, the break-joint feature is a disadvantage, and has been so proved by all who have tested the matter.—G. L. Tinker.

1. I use either poplar or pine. 2. I cut the sheet of perforated-zinc just the size I want the excluder when completed, and frame it, using 8 pieces to each sheet. Two of the pieces are cut just as long as the sheet is wide, and two are cut just as long as the sheet is long less the widths of the two end-pieces, and two are cut just as long as the sheet is wide less the widths of the two side-pieces. This makes the number eight. These strips are kept in stock, and are three-sixteenths by seven-eighths of an inch. They are placed on the edges of the sheet so as to make a square lap at the corners. The whole is nailed with wire nails that will clinch. I use a "form" when putting on the rim, so as to keep the sheet straight. Made in this way, they are cheaper and better than any wood-and-zinc board.—G. W. Demaree.

1. Whitewood, often called poplar or tulip. Not white poplar, but yellow poplar, commonly called whitewood. 2. Just nailed together; that is, if all the slats are just right, the honey-board will be strong and not come apart. Being the inventor, and having used them nearly ten years, I speak from experience. 3. Yes, sir, and it will be retained. Let bee-keepers say what they may, I desire to go on record every chance I get, that both the bee-space and the break-joint principles in honey-boards will live with bee-keepers long after you and I are gone.—James Heddon.

1. Good pine will do very well. 2. Nail them together strongly. 3. That is a disputed point, but I am of the opinion that it is of value, and will be retained.—The Editor.

CORRESPONDENCE.

PRIZE ESSAY.

Extracted Honey—Origin of the Extractor, its Use, etc.

Written for the American Bee Journal

BY C. W. DAYTON.

From the time of Jacob, man has known the value of honey. For thousands of years honey was the only sugar known, and was obtained by putting the combs in a cloth and pressing it out, or melting the combs and thus separating it from the wax. These plans were followed until one Hruschka of Venice, Italy, gave to his son a piece of unsealed comb honey. He put it in his basket and swung it around in a circular manner, when Hruschka noticed that the honey had been drained out, and concluded that the combs could be emptied by centrifugal force. Machines were soon invented for this purpose, and the advantage proved to be greater than had been anticipated. Here was the origin of the honey-extractor.

Liquid honey taken from the combs with the honey-extractor has now been before the world about 25 years, and much has been the discussion regarding its merits and demerits, as compared with other sweets. It is the only product of the apiary that has any likelihood of becoming a staple article. This it may be able to do when it has been produced in sufficient quantity, and thoroughly introduced. It will easily outstrip comb honey, on account of its cheapness and usefulness, as it is a necessary, and, not like comb honey, wholly a luxury—and the cost of production ensures this.

This introduction must be accomplished by constantly appealing to the taste. Let people taste of the honey they are asked to buy, and they will soon know whether they want it, and what to do with it. If all the extracted honey offered for sale was equal to some I have produced, there would be little hesitation in deciding that most other sweets would be driven out, and comb honey would go begging.

A little depends upon getting the bees in condition to gather the honey; a great deal more upon the time of taking it from the hives; considerable upon its preparation for market; but a decidedly important, and a very much more perplexing question than any of these, is the selling.

The selling depends largely upon the quality, and the quality upon the ripening process. The proper time for extracting, is when the combs are at least all capped over. Honey, when it is "green," has a greenish tinge, a rank taste, and is never as fine flavored as well ripened honey.

Properly ripened basswood or clover honey has a sparkling clearness like flint glass, and the taste is pure and exquisite. I have never seen any honey that I was so well satisfied to sell as that that had been all sealed over before extracting it from the combs, or that was allowed to remain in the hives a few months, and extracted as it was sold. Such honey will run comb honey a hard race at an equal price. It has not much tendency to granulate, and acquires a flavor of the bees and hive that is highly prized by those who use honey as a luxury. This flavor, often, is about all they buy it for, and if it fails in this particular, it is a disappointment. It is the most distinguishable characteristic of bee-honey, and it is seldom very apparent in honey that is gathered by the bees and ripened by artificial means.

There are as many grades of extracted honey as there is butter or cheese, and they are usually designated as basswood, clover, golden-rod or buckwheat. These are simply the sources from which the honey was gathered, and it is quite uncertain in determining the quality.

For example, basswood is always considered a finer grade of honey than buckwheat, but, in consequence of the basswood honey-flow coming on in a "shower," necessitating the hasty extraction of the honey in order to provide room for more, it may be of such consistency that the buckwheat coming on moderately, the honey may be so well ripened while it is being gathered that it is a more delicious article of honey, and worth more per pound for table use than the basswood.

It is reasonable that honey may, by absorption from the air, or the receptacles in which it is stored, lose a delicate flavor, and have a flat, dull taste instead; when, if it had remained in the hives it would have absorbed elements that banish doubts of genuineness from the minds of the most incredulous. It may require an expert to tell whether a poor article of honey was put up by the bees, but any kind of a judge can readily distinguish it when it has remained in the hives a few months.

There is needed, enough combs to carry the whole crop until the time of sale before extracting it from the combs. This is considerable expense, but it should be remembered that a good article cannot be secured so cheaply as a poorer one. This plan seems to be the only alternative. Extracted honey that has been sealed up in the combs six months, is not more expensive to the apiarist at 8 cents per pound, than comb honey at 14 cents. Neither is honey in the comb more agreeable to the taste than it is out of the comb, except that so much depends upon the time when it is extracted, or, more accurately, the place where it is ripened.

Apiculture has the reputation of being an embarkation that requires not very much capital, and especially so in the production of extracted honey. As the combs are the apiarist's capital, and as liquid honey is more cheaply stored in barrels than in combs, it is an incentive for the use of the extractor too early and too often, getting along with not more than one-fourth the number of combs.

The honey of the old-fogy and "gum" bee-keepers was allowed to remain in the "gum" until late in the fall, and hundreds there are using honey, harvested by modern methods, who say that it does not taste so delicious as it used to.

Extracted honey should be classed as first, second and third quality—not basswood, clover and buckweat; and the first grade should be marketed in the fanciest shape possible, and deserves the highest price, as a luxury. A good article has qualities that commend it to any use, but, considering the price, it is not as salable for vinegar-making as a poorer grade. Nor will it give better satisfaction. To put anything but the best quality of honey in small, showy packages educates suspicion, and often takes but one dose to a customer.

Those who buy honey in small quantities want the best, with but little regard as to what it costs. Whatever the quality or kind the honey may be, it has a highly respectable use, and should be sold for some special purpose. It has more uses than one, and must be varied in price to enable it to hold its own in competition with other substances. The strongest point in its favor, is the fact that there are so many grades, and all so nicely adapted to special use.

A custom of selling all extracted honey in small packages is belittling to the business, and casts the idea that a little of it is all that is of any use, and thereby the small package trade is doing a great deal that prevents extracted honey becoming an article for general and wholesale consumption. The best package for it is a farmer's milk-can, holding from 40 to 60 pounds, and with them I have disposed of the largest quantity and made the easiest sales.

It is preferable to shovel granulated honey from the barrels into the receptacles brought by customers, as it is likely to make a broad, every-day impression, and is in accordance with their ideas of handling a staple article. It is the common folks who use the most honey, who eat heartily, purchase in considerable quantities, and want it at all seasons.

It should be supplied at all times of the year, by the bee-keepers in local markets, so that when a market is once created, it will not be allowed a long space of time in which to die out. Those who have put a dependence upon it will change it for something else, if it is not supplied the year round.

When honey is a luxury, it is mostly eaten in the fall—perhaps on Thanksgiving or Christmas, and is soon gone, not to return until another year. To treat a staple article in like manner, is comparable to using up the winter's supply of fuel in one week, and sitting by a frosty stove the rest of the time.

There is great need of bee-keepers adopting some co-operative methods in the matter of production, marketing and general reports that people may have customs that are reasonably staid to accustom themselves to, and to assist the whole people in the efforts to put in practice the oft-repeated argument of patronizing home industries, which is applicable to the honey-industry as a substitute for sugar and syrup.

My favorite method of selling quickly, is to load a wagon with 100-pound, 50-pound and 25-pound kegs, and drive over a certain route once or twice a month. Upon the wagon-box is printed in large, plain letters the word "HONEY." It is best to take more than one grade and kind, and, in selling, full explanations should be furnished for the use to which it may be put.

That granulation is a characteristic of pure honey, is now so well understood, that is an instance of exceptional ignorance on the part of one unacquainted therewith. One or more kegs should be furnished with honey-gates, and so arranged that a pair of scales bearing the customer's jar may be placed upon it under the gate, and small amounts of honey be weighed out.

Although I have frequently been told that there was adulterated liquid honey in existence, in all my travels I have never succeeded in finding a pound of it, and consequently I may be deficient on that phase of the subject.

Bradford, Iowa.

LATE SWARMS.

How to Make them Profitable to the Apiarist.

Written for the American Rural Home

BY G. M. DOOLITTLE.

It is the custom of many bee-keepers to hive new swarms on a new stand at all times of the year, and while this is profitable in the early part of the season, it is often ruinous so far as a crop of surplus honey is concerned, where practiced the latter part of the honey harvest.

As the season advances, a different plan is needed from that used during June, and after considerable study along this line I hit upon the following plan which has worked to my complete satisfaction. As soon as a swarm is seen issuing, I take six frames of comb and two wide frames of sections, putting the same into a box or hive which is convenient to carry, and when I arrive at the hive from which the swarm is coming out, I take the frames from the box and place them down by the hive. The hive is now opened, and all the frames of brood and honey, with the adhering bees, taken out and placed in the box, after which the two wide frames are placed one at each side of the hive, and the six frames of comb put between them. The hive is now re-arranged and closed.

If the weather is warm, and there are many bees on the frames of brood in the box, about one-third of them are shaken off in front of the hive, when the box is placed in the shade a rod or two away, so that none of the bees from the swarm will find it while they are being hived, which is the next thing to do; hiving them in the re-arranged hive on the old stand. If the weather is cool, or but few bees are on the combs of brood, omit the shaking off, for it will want all of them to keep the brood in good condition.

Now take the box and place the combs in an empty hive, placing the hive where you wish it to stand, and after all is nicely fixed, leave them until the next morning. At any time during the forenoon give them a virgin queen or a queen-cell just ready to hatch, and you will have no trouble with after-swarms, for the bees feel so poor at this time that they are glad of anything in the shape of a queen.

However, if the delay is longer than 18 hours, they often get so strengthened by the rapidly hatching brood, that they will destroy the queen-cell, or kill the virgin queen, and after-swarming will be the result. Do not give them a laying queen unless you wish a prime swarm from the colony in from two weeks to 18 days, for the bees will surely use her for such swarming if the honey harvest continues for that length of time.

By this plan I get a strong colony on the old stand which will do as much, if not more, in the sections than they would if they had not swarmed, for a new swarm will work with a vigor not known to bees under any other circumstances. In ten days, if the honey harvest continues, sections are given to the colony, which has rapidly increased to such, from the combs of brood carried in the box, and as the young queen has now commenced to lay, the bees will at once go into the sections, often giving a good yield of honey; yet the main yield will come from the new swarm, as they have at least one-third more bees than they would have had they been hived on a new stand, all the field bees returning to this place.

As these bees work with a will in the new swarm, as we have them all here with the swarm, and as the harvest is at its height also, and the brood-chamber contracted, the storing of honey goes on in the sections at a rapid pace, such colonies often giving from 50 to 100 pounds of honey for their keeper, while if hived on the old plan, little save empty sections would be the result.

Now it will be seen that if the hive is left as we now have it until winter, the bees are not liable to have sufficient stores for winter, so when the harvest of white honey begins to draw to a close, the sections are taken from the sides, which were placed there at the time of hiving, and the combs necessary to fill out the hive are used to take their places. In this way the bees will fill these last for winter, and should a fall yield occur, they will often have some extra to spare for any light colonies you may chance to have.

If all the sections which were placed at the sides are not completed, they are to be taken from the wide frames and placed with those which are on top, when the bees will finish them, if the season does not drop off too sudden. At this time of the year no more empty sections should be put on the hive to take the place of the full ones taken off, but on the contrary, the number of sections should be contracted as much as possible, so as to crowd the whole force of bees on the few that are partly finished, so that, if possible, they may be completed. In this way we lessen the number of unfinished sections to be carried over the winter materially, and get nearly all of our honey in a marketable shape; in places where the fall or darker honey does not find a ready sale, as is the case in this locality.

I find it profitable to take away combs from below which are filled and sealed, placing empty combs in their stead, setting them one side to feed the bees with in the winter or spring, as some colonies will often get short, and I know of no prettier way of feeding bees than to set in combs of sealed honey; for in this way the bees have their feed in just the way nature designed they should have it.

Borodino, N. Y.

QUEEN-EXCLUDERS.

The Use of Perforated-Zinc for Queen-Rearing.

Read at the Ohio State Convention

BY DR. G. L. TINKER.

In discussing this subject, it seems proper to consider the best size of perforations in sheet metal for queen-rearing. Up to the present time, if there have been others who have made extensive experiments to determine the best size to use, they have not made it known.

The size that I have finally decided upon is somewhat more than five-thirty-seconds of an inch; in fact, I do not know the measurement in parts of an inch, but I do know that it is the smallest perforation that will admit the free and unobstructed passage of the worker-bees, and anything less is manifestly impracticable. Five-thirty-seconds of an inch will admit worker-bees, but not freely. I have here a sample of perforated-zinc having this size of perforations. It was sent out some years since by Mr. A. I. Root, and all who used it finally decided that it was an obstruction to the worker-bees, and abandoned its use.

About this time I made my first machine for perforating zinc, and made the perforations a little larger. I soon found, however, that they had to be considerably larger than five-thirty-seconds of an inch, and that the length of the perforations was not a matter to be considered, so that they were as long as a worker-bee. After changing the dies a number of times, I concluded that I had it about right, and put much of the new zinc to use in queen-traps and honey-boards. But after a little I discovered worker-bees apparently trying to gnaw the perforations a little larger, in the queen-traps, and many were seen to be poking their heads back and forth through the zinc, as if to try it before venturing through, and this even after the zinc had been before the hives for sometime.

I then saw that the bees that were apparently gnawing the zinc, were in reality fast in the zinc by the top of their heads, and the tip of their mandibles. And many of the bees were several minutes in extracting their heads. I then decided to further enlarge the perforations, and that the smallest practical perforation was one that would allow the bees to test it, as they are sure to do, by bobbing their heads through the zinc to find if they can pass without hindrance.

I then made my square-end dies for perforating zinc, now so well known, and found that it obviated all the difficulties before encountered; and yet the perforations were considerably smaller than any other perforated-zinc in use.

I have since made new dies for making round-end perforations. The size of the perforations are about the same as the dies I still use for making the perforations with the square ends.

As before stated, in queen-rearing as in the production of comb or extracted honey, the perforations in the zinc must be of a size to admit the free and obstructed passage of worker-bees; and it is found, after some three years' use of my perforated-zinc, that no laying queen has ever been known to pass it; and that no ordinarily-developed virgin queen has been able to get through it.

It is true, that by some of the methods of queen-rearing, the queens are but little larger than worker-bees, and such are able to pass the zinc; but such undeveloped queens are unprolific, as compared with fully developed queens, and they are of no practical value. It follows that bee-keepers who use perforated-zinc for queen-rearing or other purposes, should rear only good and well-developed queens, and especially since good queens can now be reared as cheaply as poor ones.

As to the methods of using perforated-zinc in queen-rearing, they are so many and so varied that I shall only be able to allude to a few of them.

The wood-zinc honey-board has of late proved to be quite indispensable to queen-breeders, as it is to many producers of comb honey.

Large numbers of queen-cells can be produced above a queen-excluder, while a good laying queen is in the brood-chamber. Indeed, it seems at this time to be the most approved method of rearing queens up to the point of hatching.

Perforated-zinc may also be used to make queen-fertilizing apartments, to be used over any ordinary hive or brood-chamber, it being only required that the queens cannot come in contact with each other to insure the mating of each one of them from separate entrances, as in my new Queen-Rearing-Chamber. But queens cannot be fertilized from the upper stories of hives, while there is a laying queen in the brood-chamber, unless they be so far removed from the laying queen as to make the establishment of an independent colony or nucleus possible; and all who claim the contrary are misleading.

Again, it is impracticable to get queens fertilized, many at a time, from any colony, except in the midst of a honey-flow where the queen apartments are connected by perforated-zinc, so that the worker-bees can go to all the apartments. It follows that some sort of an independent system of nuclei for securing the fertilization of queens is necessary in the absence of a good honey-flow.

New Philadelphia, Ohio.

MINNESOTA.

The Season and Condition of the Bees Described.

Written for the American Bee Journal

BY C. THEILMANN.

Bees in this vicinity have been in a starving condition for the past three weeks on account of wet weather, in which time we had only about three days that it did not rain. Creeks and rivers have been high, and the cornfields are so thoroughly soaked with water, that they cannot be cultivated—most of them look as green as meadows. On flat lands the corn is suffering, and looks yellow. Small grain is very rank and soft, and if it rains much more, the prospects for a crop will be slim.

My bees wintered fairly well, 2 colonies dying out of 280, when I put them out on April 4; but there were more bees on the cellar floor than usual, on account of its being too warm nearly all winter.

The first pollen came in on April 8, and from that day on there was abundant bloom, one kind following another up to now; but the weather was cold up to April, cloudy mostly through May, and rainy in June so far. There has been only about one week since May 28 that the bees stored a little more than their living. I do not think that I would have one colony alive now, if I had not fed them in time, although they had from 10 to 20 pounds of honey in their hives when I put them out of the bee-cellar.

Some of the strongest colonies suffered the most, and a number of them had eaten their brood and torn the cappings off the nearly hatching pupæ before I noticed their condition. So far I really reared consumers all spring, instead of producers (according to Mr. Doolittle's theory) for the honey crop; but it has not yet come, and at present the outlook is rather slim, for white and other clovers are badly winter-killed, and what there is left (now in bloom) has but little honey, as it is too wet.

Linden has but few buds—only one tree in about twenty has any at all, and the others have them only scattering; so the white honey crop will be small here, at best. We may have a good fall honey crop, if the weather is favorable, as all vegetation (weeds) is very strong and healthy looking.

To have the bees ready for the harvest at the right time has "turned my head" considerable lately, as I cannot find out by practice or otherwise that "right time." I can get my bees in the right condition at a certain time, if I only know the time in advance. It is clover time now, and I have strong colonies of bees to harvest a big crop, but the outside conditions are out of their usual order, which man is unable to control. I have always looked at that "right time" theory as a rather "thin concern," the proof of which I am experimenting at the present.

LATER.—Since writing the above, we had very heavy rains nearly all day and part of the night of June 23, and to-day the Zumbro river is overflowing its whole bottoms, doing immense damage on the meadows and cornfields. This is the highest flood on this river, in summer time, since 1859, and is doing the most damage, as the hay crop was nearly full growing, and the cornfields will be badly washed.

The past two days were very hot—100° above zero in the shade. Bees are not doing anything, as there is no nectar in white or Alsike clover. Mine are in a starving condition, with a field of Alsike clover (which was not much winter killed, as it is sheltered) 40 rods from the apiary, and in full bloom. Alsike never failed to yield honey heretofore.

Theilmanton, Minn., June 26, 1890.

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☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

THE BEE-YARD.

Much Bloom, but no Honey—Self-Hivers, etc.

Written for the American Bee Journal

BY F. D. LACY.

The hives are roaring full of bees, with heavy brood coming, but empty of honey. The apple-trees bloomed in their fullness, but no bees worked upon their blossoms. The wild cherry and many other wild blossoms were also slighted. White clover covers the plains, and makes the fields white with its bloom, but no bees are found at work upon it. The flowers of my wife's beautiful garden seem to have no attraction for the bees—they hurl past to distant wilds for forage, and it is a mystery what they get.

I sit by the hives, and behold that they all work from the same thing. A light and bright yellow pollen goes in on 46 bees per minute, and at a low estimate it would aggregate to at least six quarts every ten hours, besides what honey is carried in, all of which is consumed, or has been thus far.

We have had much rainy and windy weather, however, which has been a great set-back. I have a swamp, with various kinds of timber growing, a short distance to the northwest of my bee-yard—the bees all go in that direction, and I followed to find what they were working upon. Thousands were to be seen upon the ground where the water during the winter stood and has soaked away. I took some of the earth, and thought I would analyze it, but concluded that if it possessed any saccharine quality, it would only develop out to me carbon, oxygen and nitrogen—all of which I knew the mud possessed; suffice to say, the bee has a finer apparatus for analyzing than that of mine.

No swarms have issued up to this date.

ANTS AND BUMBLE-BEES.

I placed salt in front of the hives to keep the grass down, which I find to be a good way. A part of my yard is dry and sandy, and the ants invade the ground by millions. I sprinkled the ground profusely with kerosene, and exterminated them. You want to look out for the large black ant. It is a terror among bees, and very destructive, doing its work at night, destroying both bees and comb.

Bumble bees are very numerous for so early in the season. They visit the hives, and walk in without invitation. I kill them when I can.

EXPERIMENTING WITH SWARM-HIVERS.

I have made attachment of my automatic swarmer, to about 30 of the hives of my heaviest colonies. I shall use no queen-excluders, for the way I have it I am confident that it will require none. I concluded that I would not shout until I was out of the wilderness, but I hope soon to report success.

My fish-pond adjoins the bee-park, where sport thousands of bright speckled trout, and where a fine little skiff is found, in which my six beautiful children pass many happy hours; also, where my bees "wet their whistles."

On the night of May 29, three thieving boys invaded my bee-park, for which I have them upon "the string." I have invented a lock for each hive, which is simple and handy, of nominal cost, and no incumbrance.

I have also an electric wire which surrounds my bee-yard, so that no one can approach the hives without ringing the bell at my room window.

Lake Co., Mich., June 14, 1890.

CANADA.

Report of the Haldimand, Ont., Convention.

The May meeting of the Haldimand Bee-Keepers' Association was held at Cayuga, Ont., on May 17, 1890, with President Frank Rose in the chair.

THE REARING OF QUEENS.

Mr. Armstrong said he did not rear queens until swarming-time, and only from his best colonies—good honey-gatherers, of nice color, and gentle. He gave a very interesting account of his methods, and had very good results, losing very few young queens in mating.

The President and Mr. Kindree explained their plans of rearing queens.

INTRODUCING QUEENS.

Mr. Atkinson uses a Peet cage, which he puts into the hive requiring a queen, and leaves it there until the bees gnaw her out. He then removes the cage when everything is quiet.

Mr. Schisler gave an amusing account of his first attempt at introducing a queen.

Mr. Armstrong said that he thought a great many queens were lost through the bee-keeper being too anxious to see whether the queen is all right, and examining the hive too soon after the queen has been introduced. He now leaves the colony alone for several days, and never loses a queen. He uses a Peet cage, but instead of putting it between the frames, he puts it on top of the frames, and lets the bees get her out.

Mr. Overholt lets the queen run in on top of the frames in the evening, about dark, and he has been very successful.

The President thought that the most important thing about introducing queens was not to disturb the colony; do it in the evening, and as quietly as possible.

Twelve members of the association reported 411 colonies, fall count, and 396 in the spring of 1890.

It was decided to have the Secretary correspond with Mr. G. B. Jones, regarding his terms for a lecture on bee-keeping at the next meeting on the last Friday in August; also that the next meeting be held at South Cayuga, Ont.

FRANK ROSE, *Pres.*

BEE-PROVERBS.

Some Warning Suggestions from a Proverbial Experience.

Written for the American Bee Journal

BY M. A. KELLEY.

My son, let not thine enemy entice thee to tolerate frames and fixtures of diverse sizes in thine apiary. At first they may be pleasant to the eyes, being new, but they wax old, and are covered with brace-combs and vexation. They are weariness to the flesh, and engender profanity. They stir up trouble in the early morn, and do not desist therefrom until the going down of the sun. They will follow thee into the land of sleep, and vex thee in thy dreams. They beget war between the bee and her keeper, in which the weapons are hands and stings. He wildly claweth the air, and the bee getteth in her work near his off optic. He retireth in haste to his tent, and applieth divers useless remedies, and his neighbor peepeth over the fence and laugheth him to scorn. Life having lost its its point for the bee, she pineth away and is no more.

Moreover, when thou sendest thine order for odd-sized fixtures to the supply dealer, he will smile at thy verdancy, and in his heart he will call thee a fool. And when thou comest to sell thy bees, the buyer will write back, being wroth, that he wist not that he was dealing with a crank. So the odd-sized frames sticketh closer than a brother-in-law, for the other fellow, being in his right mind, will not part with his shekels in exchange. And thus shall odd-sized fixtures become a drug upon the market, and an eye-sore to the children of men.

My son, be thou warned in time and go not after the patent clap-trap man, who lieth in wait for thy lucre. Sweetly as a syren he singeth, but the end is trouble and sorrow. Cleave unto standard sizes, and good tools, and get unto thyself comfort and pleasure. Be not over-anxious to be ahead of the times, like some we wot of, for in the day that they are overtaken, thou canst laugh at their calamity. Let others fuss with fixtures of doubtful utility, and if they prove to be valuable, thou canst then invest in them safely.

These are words of truthfulness and soberness, being based on the writer's experience. Heed them, and take comfort all the days of thy bee-keeping, for if thou do not, there is trouble.

Milton, W. Va.

ROBBING.

Some Experiences with the Bees Robbing.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

Not long since there was prospect of the whole apiary being demoralized. Bees appeared to know a hive that contained honey, and thousands of bees were determined to get it. It was risky business to feed, for it was soon telegraphed all around, and thousands were determined to have a share When weak colonies were fed, it appeared to excite them, and if robbers came, made no attempt to defend their store, but invited them in, and finally went home with them. The only safe time to feed was a little before or just after sundown.

Syrup, made of any kind of good cane sugar, is a safe food for bees now, when they can fly, and excites robbing much less than honey. It should be made thin, and can be fed in any sort of a vessel with care. It is not natural for a bee to sip like a fly, and if they slip into a tin or earthen-ware vessel containing syrup, they cannot get out; if it is a wooden one, they can. They can grip wood with their feet, but cannot a smooth, glazed surface. Tin pans are good feeders, provided that cheese-cloth or some thin material is tied over loosely, so that it will settle down upon the surface of syrup, as it is taken out by the bees. Care should be taken that no bees can get under it, for if they do, they will drown. Simply spreading on the cover will not do. It must be tied around under the projecting rim.

Blocks of wood, which have kerfs cut in them by a wobbling saw, make good feeders. I was given such an one by a manufacturer, and on showing it to a bee-keeping visitor, he said: "Mrs. Harrison, you fill that thing with syrup and give it to the bees, and it will soon be a drowning, writhing mass of bees." It was in the fall of the year, when I had a colony that had not sufficient stores for the coming winter, so I filled it and gave it to the bees. In an hour or so I said: "Let us go and look at the feeder." We found the feeder empty—clean and dry, and not a dead bee. He looked astonished and said: "Is not that curious?" There is nothing curious about it to one who understands the nature of a bee's foot.

Peoria, Ills.

BUCKWHEAT.

How it Should be Grown and Harvested.

Written for the Country Gentleman
BY H. STEWART.

Buckwheat is not only one of the most useful and productive of crops, considering its short season, but it is only so when it is grown under the best conditions. Its average yield is perhaps under 20 bushels per acre, but I have grown 75 bushels once, and 40 to 50 bushels often.

The grain is one of the best for feeding all animals, but pigs especially; the bran or refuse after grinding is better food than any other, and while the straw is not adapted for feeding, it is, when used as other straw, as free from objection in any way as other straws are.

This crop may be grown in the shortest season. It may be sown from June to July. The twelfth of the latter month is the favored time where the grain is grown for making flour for sale, and where its quality is held to be superior to that produced in any other locality. The best soil is a stony gravel; it thrives best all along the range of the Appalachian mountain from North Carolina to Northern New York through West Virginia and Pennsylvania. A considerable quantity of limestone in the soil seems favorably to affect the quality of the grain for flour, but I have grown it on the fresh forest lands of Michigan, the slate hills of Pennsylvania, the loose sands of New Jersey, and here on the most ancient granite hills of Western North Carolina—everywhere without any apparent failure in its good quality. But in all cases I have given it as good care as the corn or oat crop, and have never been disappointed by an ungenerous return.

I have cut the clover late in June, turned the sod under after a few showers have started a new growth, and sowed buckwheat in July, seeding with clover and timothy, have taken a crop yielding $40 or $50 per acre, and the next year have cut hay.

The preparation of the land and the sowing of the seed are too commonly thought to be immaterial, but this is a great mistake. The principle of "what is worth doing is always worth doing well," applies to this as to every other farm work; and good plowing and harrowing and covering in the seed are essential to a good yield. As the early fall frosts are most to be avoided, a quick start and rapid growth are necessary to this end, and will mature the crop before any danger need be apprehended. As the grain contains considerable lime, phosphoric acid and sulphur, 9½, 6 and 2¾ pounds in 1,000 pounds of fresh substance, superphosphate of lime, which contains all these, is the best fertilizer, and has a far better result than yard manure, which tends to luxuriant growth and stalk and foliage rather than to grain, and delays the ripening of the seed.

Thin sowing—not more than a peck of seed to the acre—tends to the growth of side branches which bear a profusion of bloom, and largely increases the yield. Thick sowing, on the other hand, forces a tall single stem with less bloom and seed. A well-grown crop affords a beautiful sight when the field is covered with a level table of bloom, and the pleasant hum of bees which gather from all quarters, with the pleasant perfume, are additional pleasures which accompany it. It is a popular belief that the bees detract from the yield of the crop. I have never found it so, but have been confirmed in the belief that the bees are really beneficial in securing the most complete fertilization of the blossoms with a corresponding increase of grain, and while neighbors have gathered from my work a plentiful yield of honey, this has never been begrudged them from "dog-in-the-manger" objections.

The harvesting of the crop requires special care. Buckwheat cannot be stored in a barn. The succulent nature of the plant prohibits this, for it tends to rapid fermentation and heating, and seriously injures the quality of the grain by decomposing the starch in it. The flour is heavy, and does not rise when made from grain which has been suffered to heat either while in the straw or the granary. The crop is cut at the time when the grain is mostly ripe. Some of it will yet be green, and some bloom on the stalks will remain as long as the plant stands. Hence when frost may be expected, the crop should be cut. Much of the green seeds will ripen in the swath and the gavel. A gavel is a small sheaf not tied up, and this is necessary to the curing of the straw. A cradle, or a reaper which drops in an even swath, is used for the cutting. The grain lies several days in this way if the weather is fine, and is then raked up in small bundles, which are set up in a loose conical form, to admit air through them.

When the grain is dry, it is threshed at once; if by machine, the spiked concave is removed, and a smooth one is used in place of it, to prevent breaking the grain. For the same reason, the feeder should crowd the grain to the full capacity of the machine. The pedicels of the grain are very thin and weak, and are easily broken in threshing, and especially in hauling to the thresher. Hence blankets or sheets should be spread on the rack to catch the loosened grains.

When threshed, the grain must be cleaned at once, and placed on an airy floor to dry, in a thin layer. Shoveling over to prevent heating is necessary. The grain should be quite dry before it is put in bins, and large bins are not desirable. The grinding is best done on a dry, windy day, when the very absorbent grain will not gather moisture; and when the grain is to be sold, it should be floured as early in the season as possible. I have sold the flour for $6 per 100 pounds when it was first in the market, and ten days afterward the price had fallen to $3. Taking time by the forelock is thus desirable in disposing of the produce.

There are four kinds of this grain in use—the Merino buckwheat or Indian wheat, of Northern New England, which is a prolific, early maturing, but poor flouring kind; the black and grey, or silver-hull, and the now popular and valuable Japanese variety, which has a large grain, and makes excellent flour, and is the most productive of all. The silver-grey, I think, makes the lightest flour, and the best for cakes, and it is a good yielder.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith. Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Fragrant with New Honey Odor.

After having the poorest season I have seen, my bees came through the last winter without the loss of a single colony. I had to feed some during May, on account of so much wet, and very little fruit-bloom. White clover, which is very abundant this year, is now in full bloom. Most of the honey is being stored in the brood-nest. The air in the bee-yard is fragrant with the odor of new honey. This, to me, is quite refreshing. J. W. Carter.

Pleasant Dale, W. Va., June 23, 1890.

Bees Dying in the Hive.

I have started in the bee-business with 15 colonies this spring, in box-hives, which I transferred to frame hives, and all have been doing well until to-day. I put on supers sometime ago, and looked at them to-day, and all are doing well but one colony, which had commenced work in the super, but it was almost half full of dead bees. I removed the super and found the hive in the same condition, two-thirds of the bees were dead, and all the brood. The bees looked as if they had been drowned, being of a very dark color. I killed the rest of the colony for fear they would disease the rest of the bees. Will some one tell me what was the cause, or the disease they had, and the remedy ? Thomas Powell.

Macy, Ind., June 23, 1890.

Too Much Rain for the Bees.

This has been the worst spring for bees in this part of the country that I ever saw. There was no honey in the blossoms, and there seemed to be none in white clover when it first bloomed, as bees did not store any honey for two weeks after it first came out, and were in a starving condition about June 1, but since that time they have been doing well, and swarming ; but the flow does not seem to last. I think that big rains have hurt it some. We are having rain every day or two. Thos. Hoey.

Salineville, O., June 23, 1890.

Swarm Returning to Old Hive.

I bought 7 colonies of bees last winter, and put them into the cellar, and when I took them out on April 10, they were all strong except one, that was queenless, and the others robbed it. I had my first swarm on May 28. I have one pure Italian colony that swarmed on June 7, and then again on June 8. Who can beat that ? They were the largest swarms I ever saw.

What is the cause of a swarm going back to the parent hive when it has a queen ? I had one issue on June 10, I caught the queen, and put her into the new hive, and they all came out and went into the parent hive again. Mrs. S. F. Burris.

Wichita, Iowa, June 11, 1890.

[Something about the new hive was distasteful to them, and so they concluded to go back to the hive they came from. It it a good plan to give them a frame of unsealed brood, to induce them to stay in the new hive, if they seem dissatisfied.—Ed.]

Favorable Weather for Bees.

I cannot afford to do without the American Bee Journal, and no other bee-keeper can, who wishes to keep posted and be up with the age. Bees are slow about swarming. I have had only one swarm from 30 colonies—nearly all are strong, and are storing honey in the sections. We are having very favorable bee and honey weather (except wind, which has blown more than usual this season). A. M. Vannoy.

Hedrick, Iowa, June 23, 1890.

Bees are Working Hard.

Bees are just booming around here—some are filling their second case of sections like the first, with white clover honey. They do not take time to swarm, but keep working away—that is, mine do not, while other bees are swarming much, and lots of them are escaping to the woods.

Ed. E. Smith.

Carpenter, Ills., June 24, 1890.

Basswood Blossoms.

Bees are doing very well : the basswoods are loaded with blossoms, and may do great things in the honey-flow. I am ready for it. R. F. Holtermann.

Romney, Ont., June 25, 1890.

Cause of Loss in Winter.

I have hitherto hesitated in sending my report, on account of my great misfortune in losing about all my bees last winter—133 colonies out of 142—thinking at the time that it was a misfortune due to my personal neglect, because the forepart of the winter proved so mild that I did not store my bees in their winter repository until quite late. I did intend to take care of them in December, but waited for a more favorable opportunity, and dry mild weather, for we had, in January, rain and sleet, with some freezing; at one time 1½ inches of ice covered over the hives and ground.

I was careful after finding the bottom-boards frozen solid on the ground, to pry only the hives loose from the bottom-boards, and place then on another bottom for transportation to the bee-house. This jarring and coat of ice melting in the bee-house after carrying them in, I concluded, gave my bees the death-blow ; 18 colonies I left out altogether, and of these only one lived through. I afterward heard reports all around through this section of country —⅔ of all the bees winter-killed, some experienced bee-men losing all they had, and in some localities they wintered well. It is generally understood and believed that the cause of so great loss in bees dying last winter, was due to late honey-dew, which proved a poison to the bees, for the symptoms were everywhere alike—diarrhea.

In early spring, after putting them out, they would swarm out, with the hive full of honey, and unite in large masses and go off, and those remaining would make no headway in breeding. The blacks suffered the most from the disease, and, strange to say, the bees would kill off their queens and start queen-cells as if they blamed the queens for their misfortune. I watched many colonies do the same, and the weather being so cold in May, the queen-cells would not hatch, and in spite of my efforts to heat bricks and place them over the brood-nest, they would dwindle away. In this section of country, about ten miles square, last fall we could easily count 600 colonies of bees, and this spring, after spring dwindling was over, we could not count 100 colonies.

I presume that many bee-keepers have learned a lesson in neglecting to prepare their bees early for winter, with plenty of wholesome stores and warm packing. My loss in bees, and broken bones, will put a check to my bee-keeping in the future.

Stephen Roese.

Maiden Rock, Wis., June 24, 1890.

Bees Booming on the Clovers.

Bees are now booming on Alsike and white clover ; two-thirds of the bees around here perished for want of food during the last half of May. We saved all of ours, and now they are paying for the trouble and expense. H. H. Flick.

Lavansville, Pa., June 21, 1890.

Getting Considerable Honey.

We have had fine rains, and bees are getting considerable honey, and making preparations to swarm. We may have a good season yet. W. J. Cullinan.

Quincy, Ills., June 18, 1890.

Gardening for Women.

Bee-culture, poultry-raising, silk-worm, culture, etc., are often brought to our notice as possible and profitable employments for those residing in the country, who are desirous of adding to their finances. Market gardening and floriculture have been taken up by some enterprising ladies on a large scale, and made to yield good incomes, providing work for many people, but to the farmer's wife, the residents of small villages, and young girls everywhere (save in the thickly settled parts of the cities), nothing offers more certain returns for the amount of labor and money invested, than in raising small fruits and early vegetables.

Fresh, green lettuce, bright, crisp rad dishes, cucumbers for the table and pickling, squashes, tomatoes, and melons, require but little care after once the ground is prepared. Asparagus seed costs but 10 cents a package, and the two-year-old roots from 75 cents to $1.50 per 100. It takes patience, of course, to wait for the three years' growth necessary after planting the seeds before the shoots can be cut. Then you may cut from the bed for years. A medium-sized bed has been known to yield $50 worth of shoots in a single season at very moderate prices.

Strawberry culture always brings good returns, and though the labor of setting weeding, cutting runners, etc., is hard, it is not more laborious than many another thing, generally known as "woman's work."

Raspberries, blackberries and grapes require more outlay of money in the beginning, but do not take a large space, and require but little care. Some with whom I have talked regarding this matter, claim that they hesitate to try it, lest they may not find a market for their productions. Of this be assured—a *good* article never lacks a market, while indifferent ones are always a drug. If you cannot do any better with it at first, let some of it pay for the washing, sewing, dress-making kindergarten teaching—anything that you may dislike to do, but wish to obtain for yourself and family.

Your goods thus introduced, if really worthy, will soon have a good cash value. Try it, some of you sisters, and when you have made it a success, give the benefit of your experience to some of the doubting ones. INEZ REDDING.

The Hot Wave.

Clover has been in bloom for some time, but the bees are getting but very little more honey than they use. The weather is warm—yes, *hot*, with warm nights and heavy dew, and occasional showers. I have had but 3 swarms, 2 of them yesterday.

The mercury was 93 degrees "in the shade" yesterday, and I sweat so as to wet three shirts so as to have to change ; not by working among the bees—oh, no ! It came by worrying over the answers given to people in reply to Census questions asked by your humble servant. As nearly all in this locality know me, I am not surprised, but rather worried at some of the answers. Here is a sample : I asked a lady her age, and her reply was, "What do you ask for a set of teeth ?" And when I asked her if she could read and write, she wanted to know if I had any honey to sell ? and another lady ordered me out of the house because I wanted to know whethere she was a male or a female ! And so it goes ; and I believe that I am getting poorer in flesh and purse every day, and I would not be surprised if I do not weigh over 225 pounds. I presume I have your most cordial sympathy. A. B. MASON.

Auburndale, O., June 24, 1890.

Season in South California.

We have had four days of hot east wind from the Desert, which has cut off the season abruptly, which, combined with the cold, backward spring, and not any late rains, makes another poor season for this section, and the greater part of this and adjoining counties. These southern counties of California take the lead in the amount and quality of honey.

M. H. MENDLESON.

Ventura, Calif., June 10, 1890.

Wintered Perfectly.

My 105 colonies of bees have wintered perfectly, as usual. I cannot see any advantage in the cellaring of bees, when they can be wintered without loss on the summer stands packed in chaff. This time, however, I used buckwheat hulls, which is perhaps warmer than chaff. I placed each colony on the scales before packing for winter, and made sure that each had at least 30 pounds of good honey for stores.

On June 1, I found 75 colonies on the verge of starvation—owing to immense quantities of brood having been reared, and the season turning wet and cold during fruit-bloom. I immediately fed 200 pounds of sugar syrup, by filling the frames with the same and placing them in the brood-nest. This is the second time during my bee-keeping experience that I have been compelled to feed in June.

Bees are now doing well, nearly all of mine being in the supers, and honey is coming in fast when the sun shines, which is no more than half of the time. The season is very late—no swarming yet—and I do not expect a very good yield this season.

The AMERICAN BEE JOURNAL is finding its way into a great many bee-keepers' hands in this vicinity, and is highly praised where-ever it goes. H. J. ROGERS.

Stannard's Corners, N.Y., June 23, 1890.

An Average Crop Expected.

I commenced the season of 1889 with 7 colonies in good condition, increased them to 28, and took 1,240 pounds of honey, mostly in 1-pound sections. I had some experience in transferring, uniting and dividing, and thanks to the AMERICAN BEE JOURNAL and other helps, I was successful in each. I lost one colony in wintering, or in March it starved—it could not live on pollen. The 27 I took out of the cellar on April 5, and they are booming, one colony working in the third story, and some others about ready for the third. Swarming is the order of the day, and I have my hands full. I never saw white clover so abundant, and linden promises wonders. The weather has been against us all through May and part of June, but with good weather we will have an average honey crop.

JOS. L. FLINT.

Marion, Iowa, June 25, 1890.

Doing Finely—Prospects Good.

Bees are doing finely, and the prospects for a good honey crop is splendid at present. Most of my colonies have cast one large swarm each ; swarms that issue after this date, will be returned, to keep the hive well populated. Sections have been given to the stronger colonies. A few of the hives have cases that are nearly filled with honey, which is unusual for this locality—our main crop is gathered in the fall.

G. M. WHITFORD.

Arlington, Nebr., June 23, 1890.

Storing Honey—Wet Weather.

My bees are in good condition. The section-cases have been on for ten days, and they have stored 14 pounds per colony in that time. In ten more days the sections will do to come off. I had 8 new swarms, and they are working in the sections. The white clover is blooming here, but the wet weather is putting the bees behind.

JACOB SHAFFER.

South Park, Ky., June 21, 1890.

Gathering Honey—Swarming.

I had 90 to 100 hives full of bees between June 4 and 12, and fed them 300 pounds of honey. I have not had a new swarm as yet this season. Since June 22 they have seemed to gather quite a little honey. I put on 68 cases yesterday for the first, and honey is coming to day free enough, so that they would not pay any attention to honey put out in the yard. I examined the hives on June 23 and 24, to clip the queens, wings, but I did not find any queen-cells started, so I do not look for swarms for several days. O. R GOODNO.

Carson City, Mich., June 27, 1809.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents : or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

Mid-Summer—1890.

ILLUSTRATED
CATALOGUE
OF
BEEKEEPERS'
SUPPLIES

FOR SALE BY

THOMAS G. NEWMAN & SON,

246 East Madison St., Chicago, Ill.

Our Annual Catalogue and Price-List is herein presented to our patrons, and we would especially invite a careful perusal of it before ordering supplies for the apiary. As this Catalogue contains illustrations and descriptions of many of the articles enumerated, as well as prices, purchasers can easily *select* such as they desire, and compute the entire cost of the goods ordered. Please remember that goods offered at *low prices* are often *dear*, because they are generally proportionately *inferior*.—"*Excellence is Cheapness.*"

Your full address, plainly written, is very essential in order to avoid mistakes and delays.

How Goods are to be sent, should be distinctly stated. Anything to be shipped by freight should be ordered from 10 to 30 days before needed for use, according to the distance from Chicago. Express charges are high on long distances, and heavy goods should not be sent by Express, unless particularly needed for use at once.

We Pay Postage on all articles quoted by mail. All others are to be sent by express or freight, at the purchasers' expense.

Goods will be sent C.O.D. only when sufficient money is received with the order to pay charges both ways, in case they are not taken from the express office by the person ordering them.

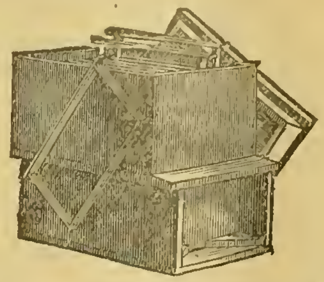
Remit by Express Money Order, Registered Letter, or Bank Draft on Chicago or New York, payable to Thos. G. Newman & Son. *Checks on local Banks* cost us 25 cents for collection, and if you send such, add that amount, or we shall deduct it from your order.

If Goods are damaged or not such as were ordered, *do not return them*, but write to us, and we will direct how to dispose of them.

Credit.—We sell on *small* margins, and cannot afford to take the risk of selling on Credit. If we did a credit business, we should be obliged to add from 10 to 20 per cent. to our present prices, to make up for those who never pay, and for clerk-hire to keep books, etc.—this we know our cash customers would not think to their advantage. In order not to do injustice to any one, we make this an **invariable rule**—*therefore do not ask us for credit.* This system gives all the advantage to "cash customers," but the "credit system" works to their injury. We therefore always require *Cash with the Order.*

STANDARD LANGSTROTH BEE HIVE.

(14x18⅜ inches inside.)



SAMPLE HIVES—*Nailed, not painted.*

No. 1.—Brood chamber with portico, 10 frames, 7½ inch cap, but no surplus arrangement	$1 25
No. 2.—Same as No. 1, with the Comb Honey Rack complete	2 00
No. 3.—Same as No. 2, with an additional story containing 10 extra frames for extracting, interchangable with those in the brood chamber—a complete 3 story hive	2 50
No. 4.—Brood chamber with portico, 10 frames, and a 7 inch story, with 7 cases containing 21 Prize Boxes, and tin separators, for surplus honey, with a 2 inch cap	2 25
No. 5.—Same as No. 4, with an additional story containing 10 extra frames for extracting, a complete 3 story hive	2 50
No. 6.—A complete 2 story hive containing 20 interchangeable frames, with a close-fitting—2 inch—cap	1 75
No. 7.—Same as No. 6, with the second story containing seven cases holding eight one-pound sections each (56 in all), and two tin separators attached to each case, complete	2 85
No. 8.—A 3 story hive containing 20 interchangeable frames and seven cases, as described in No. 7	3 25
No. 9.—Brood-chamber with portico, 10 frames, and Heddon's surplus arrangement, containing 32 one-pound sections	2 00

All Langstroth hives have metal rabbets for the frames to rest on.

Material for Langstroth Hives, in the Flat, Ready to Nail.

Numbers	1	2	3	4	5	6	7	8	9
5 or more,	80c	$1.10	$1.40	$1.40	$1.70	$1.10	$1.50	$1.80	$1.10
10 or more,	78c	1.08	1.38	1.38	1.68	1.08	1.48	1.78	1.08
25 or more,	75c	1.05	1.35	1.35	1.65	1.05	1.45	1.75	1.05
50 or more,	73c	1.03	1.33	1.33	1.63	1.03	1.43	1.73	1.03
100 or more,	70c	1.00	1.30	1.30	1.60	1.00	1.40	1.70	1.00

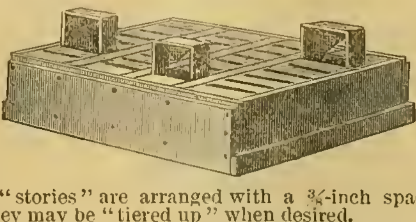
☞ The top and bottom-boards, on all the Hives, are in one piece.

☞ We make Hives Nos. 4 and 5 to contain 28 one-pound Sections, at the same prices, when so ordered.

THE HEDDON SURPLUS-CASE,

As Used on Our Langstroth Hive, No. 9.

is designed for obtaining honey in the comb, without the use of separators. The sections for this arrangement are 1¾ inches wide, and will hold just the same quantity of honey as the 2-inch sections when separators are used. In the absence of separators, of course the sections should be filled with comb foundation, in order to secure straight combs, and such as may be packed in the crates for marketing without interfering with one another.



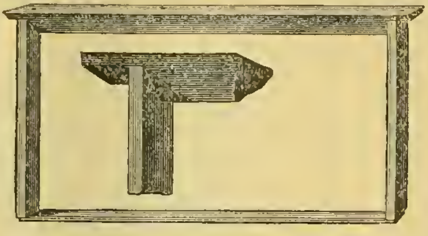
As these "stories" are arranged with a ¾-inch space over the sections, they may be "tiered up" when desired.

For those who wish to "tier up," or to get extra "stories" of the above, we will furnish the material, ready to nail, of either kind, with the full number of sections, at 45 cents each; or the same nailed, all ready to go on the hive, at 65 cents each.

☞ Also with T-Tins, at the same prices, when so ordered. ☜

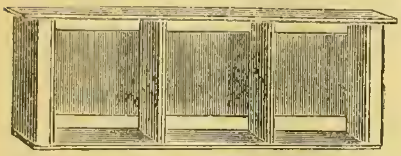
MATERIAL FOR LANGSTROTH FRAMES.

Ready to nail—9⅛x17⅝ outside.



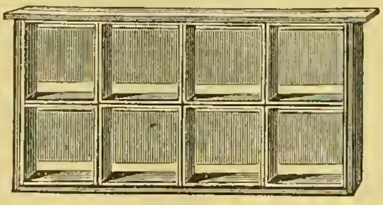
100 frames...	$ 1 10
1,000 frames....	10 00
Bored for wiring, having flat top-bars, per 100...	$ 1 65
Bored for wiring, having flat top-bars, per 1,000.	$16 00

WIDE FRAMES FOR TWO-POUND SECTIONS.



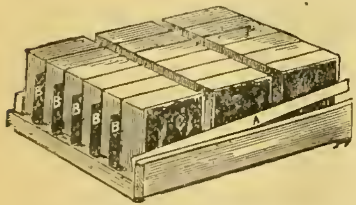
Material for wide frame, to hold 3 2-lb. sections, on Langstroth hive, per 100,	$2 00
Tin Separators to fit these wide frames, per 100	2 50

WIDE FRAMES FOR ONE-POUND SECTIONS.



Material for wide frames, to hold 8 one-pound sections, on Langstroth hive, (same size as the brood frames,) per 100..	$1 50
Tin Separators to fit these wide frames, per 100................	2 00
Sample frame, with boxes and separators,......................	25
The same, sent by mail, postpaid.............................	75

Comb Honey Rack.



The engraving shows the Comb Honey Rack as used on the Langstroth hives Nos. 2 and 3. It contains eighteen 2-lb. sections, with the outside ones (C) glassed; 5 tin separators (B), and the wedge (A) to tighten or loosen the sections for manipulation.

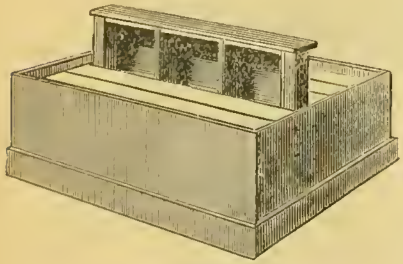
We also make these Racks to fit any hive.

In ordering a special size, give only the width of your hive inside, and the length of the top-bar of your frames.

Sample Rack, by express, nailed, without sections.....	$ 25
Sample Rack, nailed, with sections, separators and glass, complete, by express, crated.................	75
Material for Rack, without sections, by mail...........	75
" 12 Racks, ready to nail......................	1 25
" 25 " " "	2 50
" 50 " " "	4 50
Tin Separators for this Rack, per 100............	2 50

☞ Sections 5¼x6¼ can be used in both of these surplus stories.

Surplus Story for Comb Honey.

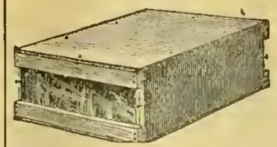


The engraving shows the 7-inch story as used on the Langstroth hives Nos. 4 and 5 (with one Wide Frame raised up), showing the 3 2-pound sections, with a tin separator fastened to the back of the wide frame.

The upper stories of Nos. 7 and 8 are the same style as shown here; the wide frames holding 8 1-lb. sections, instead of 3 of the 2-lbs.

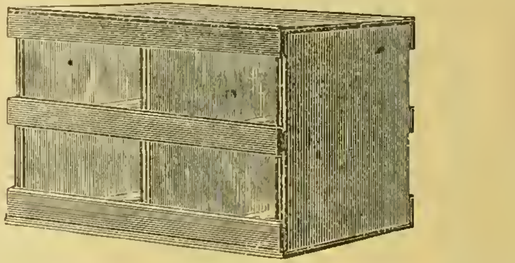
We also make this story for Nos. 4 and 5—each wide frame holding one row of four 1-lb. sections—at the same price.

SHIPPING CRATES FOR COMB HONEY.



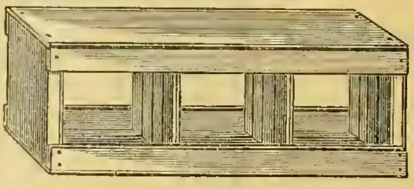
Sample Crate, nailed, containing 12 sections, without glass, by express	$ 40
Material, ready to nail, 50 Crates.	3 75
" " " 100 Crates.	6 50
Glass for these Crates, per 100 lights	1 00

The Crate shown above holds **twelve one-pound Sections,** with glass on the end instead of the side, taking smaller glass, and less work on the wood parts. The inside measure is just 12 inches long; carrying 2 rows of sections of either width, 6 to the foot or 7 to the foot. Those using both widths of sections will not require two kinds of crates.



The above Crate holds **twenty-four one-pound Sections** 2 inches wide; (or, sections 1¾ inches wide, if so ordered.) The side cleats are grooved for glass; and the gross weight will not exceed 28 pounds. As the markets now demand small packages, this size of crate gives excellent satisfaction.

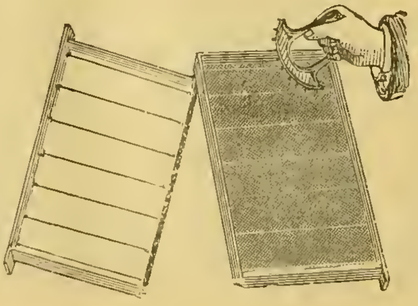
Sample Crate, nailed, containing 24 sections, without glass. by express....................................	$ 60
Material, ready to nail, 50 Crates.......................	6 00
" " " 100 Crates........................	11 50
" " " 1 Crate and 1 Section, by express	15
" " " " " by mail, postpaid	70
Glass for these Crates, per 100 lights........................	2 00



The above Crate will hold **twelve two-pound Sections** of honey. Either the Crate or the Sections may be glassed. The gross weight of this Crate, when filled with honey, is about 25 pounds; making it a neat and convenient package for handling and shipping.

Sample Crate, containing 12 two-pound Sections, nailed, without glass, by express............................	$ 50
Material, ready to nail, 50 Crates	4 75
" " " 100 Crates...........................	9 00
" " " 1 Crate and 1 Prize Box, by express	15
The same, sent by mail, postpaid........................	65
Glass for these Crates, per 100 lights.....................	3 00

☞ All these Crates can be furnished, when so ordered, with a solid piece of wood for one side, instead of slats grooved for glass, without extra charge.



Wiring Tool,

FOR

Pressing Foundation

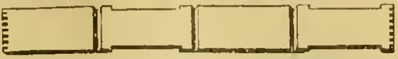
INTO

WIRED FRAMES.

SOMETHING
VERY USEFUL.

Price, by mail, 20c.
By express, 15c.

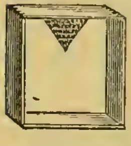
ONE-PIECE SECTIONS—for Honey in the Comb.



We keep constantly in stock the two regular sizes, 4¼x4¼, and 5¼x6¼, a trifle less than 2 inches wide, with both narrow and wide tops; these will respectively hold about one and two pounds of honey each. We also have them seven to the foot, with narrow tops. The following are our latest prices:

	4¼x4¼.	5¼x6¼.
In quantities of 1,000	$3 50	$4 50
" " 500	2 00	2 50
" " 250	1 25	1 50
" " 100	60	70

☞ Orders for 3,000, or more, 4¼x4¼, at $3.00 per thousand. ☜



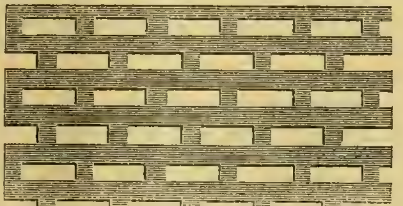
DOVETAILED SECTIONS.

These are made in four pieces, 5¼x6¼, with wide or narrow tops; all a shade less than 2 inches in width. The prices are the same as the one-piece sections.

We fill all orders of the above size, and **carry no others in stock.**

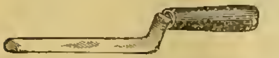
Odd Sizes of Sections. 5x6 inches, or less, will be made to order in quantities not less than 500, at $3 for 500, or $5 for 1,000, and can be furnished in about a week after we receive the order.

Perforated-Zinc for Excluding Drones and Queens.



We carry in stock two sizes, viz: 19¾x14⅛ inches, for Langstroth Hives—price, 20 cts. each; also in sheets 3x8 feet—24 sq. ft.—price, $2.00 per sheet. We can cut pieces to order at 10 cts. per square foot. Strips, with one row of holes, ⅝x19, 90 cents per hundred. When ordered by mail, add 10 cents per square foot, for postage.

The Muth Honey-Knife.

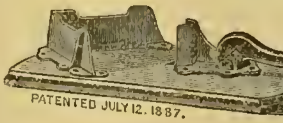


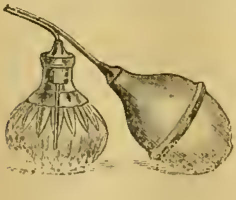
By express, ... 50c
By mail, postpaid, ... 65c

SECTION PRESS.

The Wakeman & Crocker **PRESS**, to be used for putting together One-Piece Sections—at wholesale or retail.

Price, **$2.00** each, by express. By the dozen—rates given upon application.


PATENTED JULY 12, 1887.



Atomizer for Spraying Bees.

This Atomizer can be used to advantage for changing the scent of bees when introducing queens, uniting colonies, making nuclei, dividing colonies, etc. Price, 75 cts.

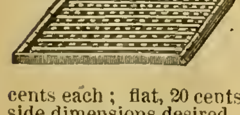
Mailed in a neat box, at letter postage, for 16 cents extra.

LONG RUBBER GLOVES.

Long Rubber Gloves, per pair, by mail................ $1 50

To ascertain the size of glove desired, lay the open hand, palm down, on a sheet of paper, and mark the outline of the hand and fingers with a pencil.

WOOD-ZINC SLATTED HONEY-BOARD.

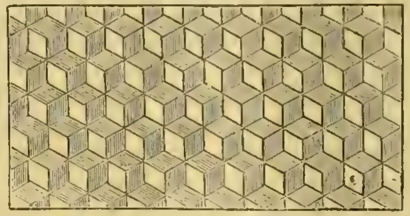


This honey-board is made of alternated strips of wood (1⅛ inches wide), and perforated zinc (¾ of an inch wide), with one row of holes. The zinc strips are held in place by fitting into saw kerfs on the sides of the strips of wood. Price, nailed, 30 cents each; flat, 20 cents. In ordering, please give the exact outside dimensions desired. When no size is given, we will furnish them to fit the standard Langstroth hive.

Comb Foundation for Brood-Frames.

All our foundation is made by Dadant & Son, who have justly earned the reputation of making the best foundation in the world.

We keep four sizes on hand, viz: 4¾x17, 12x18, 8x16½, and 10x11, and can fill orders in any quantity, prompty. Orders for special sizes filled within a week of the receipt of the order, without extra charge, and it will be shipped direct from the factory.



One pound, by mail, postpaid, small sheets	73c
1 to 10 lbs., per lb., by express	48c
11 to 25 " " "	47c
26 to 50 " " "	46c
51 to 100 " " "	45c

Prices Subject to Change, Without Notice.

Thin Foundation for Surplus Honey.

We keep three styles of thin foundation for comb honey in sections. The figures in the first column giving the prices of the THIN—9 to 10 square feet to the pound. Those in the last column being the prices of the EXTRA THIN, and also of the Van Deusen (with flat bottom)—11 to 12 square feet to the pound:

	THIN.	EXTRA THIN.
1 to 10 lbs., per lb., by express	58c	68c
11 to 25 " " "	57c	67c
26 to 50 " " "	56c	66c
51 to 100 " " "	55c	65c

Wired Comb Foundation.

This prevents sagging, making all combs strong and durable. It has flat-bottomed cells, exceedingly thin and even, the wire being incorporated into it. It is for use only in the brood-chamber. Size, 8x16½ and 10x11 inches.

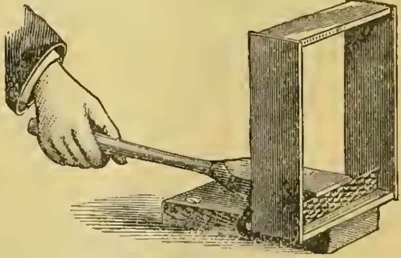
1 to 25 lbs., per lb	68c
25 to 100 " "	66c
Samples of all kinds, by mail	10c

PARKER'S

Foundation Fastener

Price, 25 cents, by express, or 40 cents, postpaid. Suitable for 1 lb. sections.

The fastener should be screwed to a table. The illustration will show the position of the section and foundation, and the method of operating.



Comb Foundation Mills.

	Vandervort.	Root.
6 inch Rolls	$15 00	$13 50
10 "	20 00	20 00
12 "	25 00	30 00
14 "		40 00

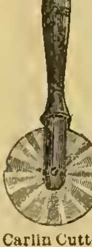
Carlin Foundation Cutter.

Small size, with tin wheel,....10c
Large size, with steel wheel,..75c

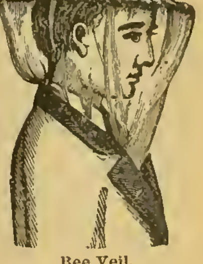
When wanted by mail, add 2c. to the former and 5c to the latter price.

Bee Veils.

The accompanying illustration gives a good view of these veils as they are worn,—making it a complete face protection. Price, by mail, 30 cents.

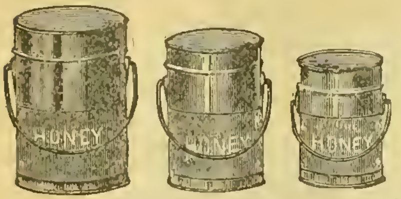


Carlin Cutter.



Bee Veil.

Straight Tin Pails for Honey.



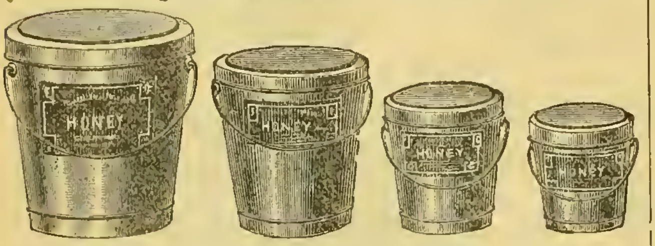
These pails have a full cover, and are excellent for selling honey in the home market, and after the honey is candied, it can be shipped anywhere.

All sizes have a bail or handle, and when empty will be found useful in every household.

Assorted samples of the three sizes, put inside of one another as a nest, price 40 cents by express. The following are the prices in quantities:

		Per dozen.	Per 100.
Gallon,	holding 10 lbs. of honey	$1 80	$12 00
Half Gallon,	" 5 " "	1 50	9 00
Quart,	" 2½ " "	1 20	7 00

Tapering Tin Pails for Honey.



It will be noticed that these pails are tapering in shape. All the sizes have a bail, and on the 25-lb. pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides, the covers are deeper, and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Assorted samples of the five sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cents. Prices in quantities as follows:

To hold	1 lb.	4 lbs.	7 lbs.	13 lbs.	25 lbs.
Per dozen	$ .75	$1.25	$1.50	$2.00	$3.25
Per 100	5.00	8.00	10.00	14.50	23.00

WOODEN PAILS FOR HONEY.

Wooden water-pails, well painted outside, with 3 iron hoops and a tight-fitting wooden cover, at $2.00 per dozen. They hold 25 lbs. of honey, and, when empty, they can be used as an ordinary pail.

Similar Pails to the above, with 2 hoops, well painted, to hold 20 lbs. of honey, at the **same price**, with a cover that is driven into a croze, making as tight a joint as a head of a keg. These Pails, filled with honey, can be as safely shipped as kegs or barrels.

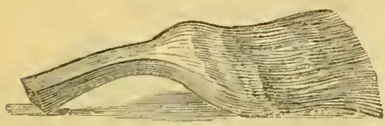
Red Labels for Pails.

Three sizes, ranging in size for pails to hold from one to ten pounds of honey. Price, $1.00 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than one hundred. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1 50	$2 00	$2 25
500 Labels	2 00	3 00	3 50
1,000 Labels	3 00	4 00	5 00

Samples of each of the Labels will be sent free, upon application.

YUCCA BRUSH.



For brushing bees from the combs. Price, 5 cents each, or 50 cents per dozen. Postage, 1c. each, extra.

SEEDS for HONEY PLANTS.

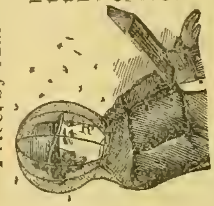
White Clover—per lb., 30c—per peck, $2.75—per bu. (60 lbs.)	$10 00
Alsike Clover—per lb., 25c—per peck, $2.25—per bushel	8 00
Melilot or Sweet Clover—per lb., 20c—per peck, $1.75—per bu.	6 00
Bokhara Clover—Imported—per pound	50
Spider Plant per oz., 20c....per lb.	2 00
Motherwort " 10c.... "	1 00
Cleome, Rocky Mountain Bee-Plant " 15c.... "	1 25

We keep no seeds in stock except those enumerated above.

IF TO BE SENT BY MAIL, add 10 cents per pound for postage.

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

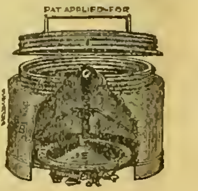
It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

☞ IN A RECENT FIRE ☜

The netting of 60 dozens of those Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each or two for $1.10,** if ordered at the same time. They are practically just as good as ever, but slightly soiled. To secure these, **Order at once.**

We will send this Veil and the BEE JOURNAL one year, for **$1.50**; or we will give the Veil **FREE for two NEW subscribers** to the BEE JOURNAL—[or one for the BEE JOURNAL and one for the HOME JOURNAL] for one year, with $2.00 for the subscriptions.

Hastings' Perfection Bee-Feeder.



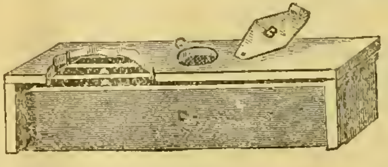
This Feeder will hold one quart, and the letting down of the feed is regulated by a thumb-screw. The cap screws on securely. It is easy to regulate,—either a quart or a spoonful—and that amount can be given in an hour or a day, as desired. By it the food can be given where it is most needed—just over the cluster. Not a drop need be lost, and no robber bees can get at it. Price, 40 cts., or a dozen for $3.50. Postage, 10 cents extra.

Feeder for Top of Hive.

It has two side entrances for the bees, and the cover of the hive is the cover to be used on the feeder. It is the full size of the hive, and is filled with the usual partitions on which the bee may travel. It has a large capacity. Price.—Nailed, 50 cents; flat, 35 cents each.

☞ When no size is given, we will send them to fit the standard 10 frame Langstroth hive.

Shuck's Bee-Feeder.



A Shuck Feeder may be placed at the entrance o the hive, any time of the day, without danger from robbers; it feeds much o little as may be desired the feed can be reached by the bees only from the inside of the hive. Price, by mail, 30 cents. By express, 25 cents each, or $2.40 per dozen.

WIRE NAILS.

We carry a full line of wire nails, and can fill orders for an quantity promptly. For nailing Sections, Cases, Frames, Racks, Crates, etc., they are very essential.

The entire length of the nail being the same thickness, they do not loosen like ordinary iron nails, and are not as liable to bend or break. They can be easily driven through two pieces of tin.

From the assortment of lengths given in the table below, any kind of nailing may be done, even to making large boxes.

Length of Nails.		Size of Wire.	Number in one lb.	Price.
⅜	inch long,	wire No. 20,	10,000	per lb 25c
½	"	" 19,	5,330	" 20c
⅝	"	" 18,	3,300	" 16c
¾	"	" 18,	2,750	" 15c
⅞	"	" 17,	1,780	" 13c
1	"	" 17,	1,555	" 12c
1¼	"	" 16,	910	" 10c
1⅓	"	" 16,	760	" 10c
2	"	" 15,	435	" 9c

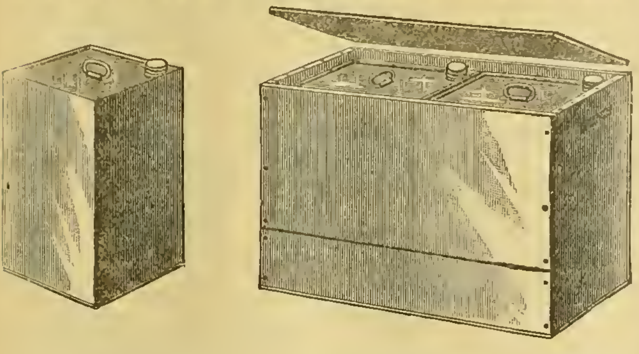
If wanted by mail, add 18 cents per pound for postage.

☞ We can furnish larger nails, in 5-pound packages only—up to 5 inches in length—when desired.

Enameled Cloth,

For covering frames. Price per yard (45 inches wide), 20 cents; a whole piece of 12 yards for $2.25. If ordered by mail, send 15 cents per yard, extra, for postage.

SQUARE HONEY-CANS



The above illustrations show the 60-pound SQUARE HONEY-CANS which are becoming quite popular for shipping extracted honey. They are enclosed in a solid case of wood, and the boxes contain either 1 or 2 Cans, as may be preferred. We can furnish them at the following prices, with a 1½-inch Screw-Cap in the corner of each Can. For the convenience of digging out candied honey, we can furnish these Cans with an additional 4-inch Screw Cap, for 5 cents extra on each Can.

1 Single Can..boxed..$	.45	1 box of 2 Cans ......$	.75
12 Single Cans.boxed..	5.00	12 boxes of 2 Cans	8.40
100 Single Cans.boxed..	40.00	100 boxes of 2 Cans	65.00

EXCELSIOR HONEY-EXTRACTOR.

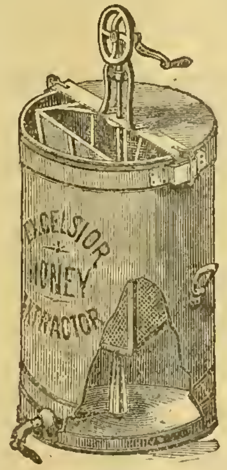
We respectfully refer all who are looking for the best Honey-Extractor, to any one using an Excelsior. The Excelsior honey-extractor can only be equaled by close imitation, and never excelled. It is made entirely of metal, and is consequently very light, strong and durable, with lugs at the bottom for firmly attaching it to the floor, if desired.

For 2 American frames,	13x13	inches	....	$8 00
For 2 Langstroth "	10x18	"	....	8 00
For 3 " "	10x18	"	....	10 00
For 4 " "	10x18	"	....	14 00
For 2 frames of any size,	13x20	"	....	12 00
For 3 " "	13x20	"	....	12 00
For 4 " "	13x20	"	....	16 00

The $8.00 and $10.00 sizes are made to accommodate those who désire a cheap but practical machine. The Cans are smaller, the sides of the baskets are stationary, and they have neither covers, strainers, nor metal standards.

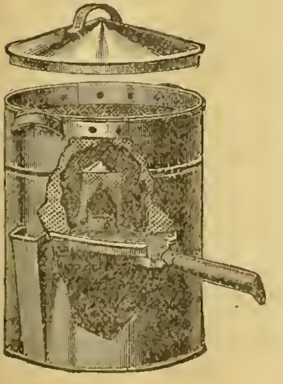
The Comb-Basket having vertical sides, insures the extracting power alike for the top and bottom of the frames. The sides of the basket in the $12.00, $14.00 and $16.00 Extractors being movable and interchangeable, greatly facilitates the operation of thoroughly cleaning. The basket can be taken from or replaced in the Can in a moment, there being no rusty nuts to remove, or screws to take out.

At the bottom of the Can, and below the basket, is a cone or metal standard in the $12.00, $14.00 and $16.00 Extractors, in the top of which revolves the bottom pivot of the basket, thereby giving room for 60 to 100 lbs. of honey without touching the basket or pivot below. Cans of the other sizes are shallow.



The $12.00 size.

Excelsior Wax-Extractor.



We make two sizes, the smaller one having about the capacity of the usual wax-extractors now in use.

The advantages of this extractor are :

1, It is more easily operated, there being no necessity for removing the top to refill it with water.

2. The wax melts more quickly, because it is brought into a more DIRECT contact with the steam.

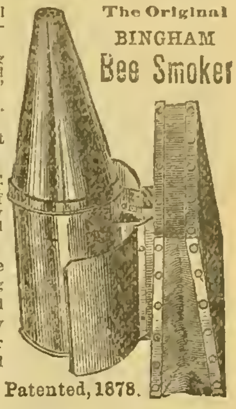
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.

The filler for water acts also as an indicator as to the amount of water in the boiler; for when the steam escapes through the filler, more water will be required.

Keep a kettle of hot water ready to fill it when required.

Price, small size,........................	$4 00
" large "	5 00

BINGHAM SMOKERS.



Patented, 1878.

The Michigan Bee-Keepers' Association, having all the Smokers before it, "pronounced Bingham's Patent Smoker the best."

J. P. Moore, Binghamton. New York, after using one some time, said : "My Smoker troubles are all over, and bee-keepers owe you a debt of gratitude."

Professor Cook, of Michigan Agricultural College, says : "It is the best in the market."

R. M. Argo, Lowell, Kentucky, says : "It is all that any bee-keeper could desire."

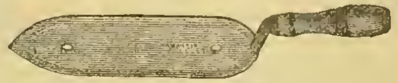
Paul L. Viallon, Bayou Goula, La., writes, April 6, 1878. "Your Smokers are far superior to any ever invented, and we bee-keepers owe you a vote of thanks for your ingenious invention. Many may try to improve on yours, but I am positive none will make a better one."

This is the first and only bellows Smoker ever made which would burn stove-wood. It burns anything combustible, and needs no care except to be refilled once in one or two hours. Works easy and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time, stings, and money, and perhaps a valuable horse.

BINGHAM & HETHERINGTON

HONEY KNIVES.

Patented May 20, 1879.



The most extensive Bee-Keepers use them exclusively.

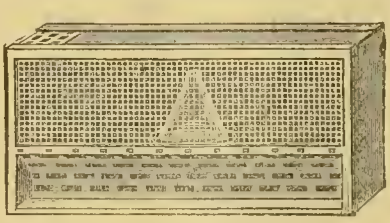
The Knife is so constructed that only the thin beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings from a sharp plane. As only the edge of the knife touches the honey, it does not wade and stick like other knives, but glides easily over curves, plumes and hollows, leaving the uncapped honey free from caps, and the cells as clean, perfect and smooth as if they had never been capped. They are two inches wide, tempered and finished like a razor, and will last for a life-time.

			each.	per dozen.
The Doctor Bingham Smoker........................	3½	inch,	$2 00	$14.00
The Conqueror Bingham Smoker	3	"	1 75	13.00
Large Bingham Smoker, wide shield................	2½	"	1 50	11.50
Extra Standard Bingham Smoker, wide shield....	2	"	1 25	9.50
Plain Standard Bingham Smoker, narrow shield..	2	"	1 00	8.00
Little Wonder Bingham Smoker, narrow shield...	1¾	"	65	5.00
Bingham & Hetherington Honey Knife............	2	"	1 00	10.00

Knives sent by mail, post-paid, at $1.15 each.

Drone and Queen Trap.

The engraving shows Alley's Combined Drone and Queen Trap, with the perforated-metal entrance, the tin slide, the perforated metal at the top, through which the workers, that enter the trap, pass out, and also the cone through which the drones or queens pass into the trap. The front of the trap, as will be noticed, is covered with wire cloth.



In using the trap place the open side towards the entrance of the hive; the tin slide which forms the top need not be opened except when a queen is to be released, or drones are to be removed.—Arrange the entrance so that all the bees must pass through the zinc. Full directions accompany each trap.

Price 50 cents; by mail, 65 cents; 12 in the flat, and one nailed, 13 in all, $3.50; 50 in the flat, $12.00.

T-TINS.

Any length, per foot, 1 cent. For Langstroth Hives, 14 inches, cent each.

PURE HONEY

FROM

F. L. SCHUELER'S APIARY

LA SALLE, ILL.

WARRANTED STRICTLY PURE.

No. 5.

PURE EXTRACTED

WHITE CLOVER

HONEY

From the Apiary of

M. HARRISON & CO.

TAMA CITY,

IOWA.

No. 6.

TWO POUNDS

PURE

EXTRACTED

HONEY

GATHERED FROM

WHITE CLOVER.

FROM THE

ITALIAN APIARY

—OF—

JOSEPH I. WATSON,

JANESVILLE, WIS.

No. 11.

Comb Honey

FROM THE APIARY OF

HARVEY FEATHERS,

ROYALTON, WIS.

No. 1.

WARRANTED

PURE HONEY

G. DARE, Adams, Iowa.

No. 15.

Gross Weight........lbs.........oz.

W't of Case........lbs.........oz.

W't of Honey........lbs.........oz.

No. 18.

PURE EXTRACTED

HONEY

White Clover.

From the Apiary of

BRIGHT BROS., Mazeppa, Minn.

No. 16

COMB HONEY

From the Apiary of

WM. H. JOHNSON,

OMAHA, NEB.

No. 2.

ONE POUND
PURE
EXTRACTED

HONEY

GATHERED FROM
BASSWOOD.
From the Apiary of
E. T. JORDAN,
HARMONY, IND.

No. 7.

PURE HONEY
PUT UP BY
W. W. FISHER,
TOLEDO, OHIO.

No. 10.

PURE HONEY
GATHERED FROM
WHITE CLOVER,
FROM THE APIARY OF
GEO. W. PENN,
BRIDGEWATER, CONN.

This honey is separated from the combs by the Extractor just as it is brought in from the flowers, preserving the respective flavor of each variety It is not possible in all cases to have the contents of each jar entirely from the blossoms named, yet sufficiently so to give their characteristic flavor.

No. 14.

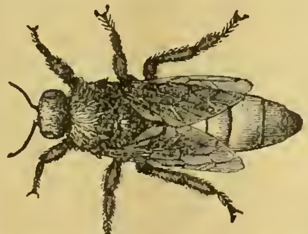
ONE-HALF POUND
PURE HONEY
G. HART, Kent, O.

No. 12.

WARRANTED
PURE
HONEY
F. A. GIBSON,
RACINE,
Wis.

No. 13.

.........LBS.
PURE
EXTRACTED



HONEY
From the Apiary of
JOHN H. BALL,
Palatine, N. Y.

All pure honey will crystalize, especially if exposed to the cold. Putting the jar in hot water will bring the candied honey to its fluid state without injury.

The corks should be loosened and the water heated gradually, in order not to crack the jar.

No. 4.

HANDLE WITH
CARE.

No. 8.

WHITE CLOVER HONEY.

It is not possible in all cases to have the contents of each package entirely from the blossoms named, yet sufficiently so to give distinctly their characteristic flavor.

This honey will candy as soon as cold weather begins and is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the cover so it will not ooze out. When it is all melted, remove and cover again. Some liquify it by placing the receptacle in hot water, supported on a thin strip of wood.

No. 17.

PURE HONEY
From the Apiary of
JAMES W. HANSON,
CHICAGO, ILL.

No. 3.

PURE HONEY

This honey will candy as soon as cold weather begins, and is, in fact, the best proof of its purity To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the cover so it will not ooze out. When it is all melted, remove and cover again. Some liquify it by placing the receptacle in hot water, supported on a thin strip of wood.

L. ADAMS,
MAYFAIR, Cook Co.,
ILLS.

No. 19.

TAKE NOTICE.—This honey will candy, or become white and hard, as soon as it becomes cool, or cold weather begins, and this candying is, in fact, the best proof of its purity. To restore it to the liquid form, set it in a warm oven or on the reservoir of the stove, removing the stopper or cover so it will not ooze out. When it is all melted, remove and cork or cover again. If sealed up while quite hot, with a cork dipped in melted wax (or with the inside of the cover waxed), it will usually not candy again. Some liquify it by placing the bottles in hot water. To prevent breaking the glass, let the bottles rest on a thin strip of wood.

No. 9.

SUPPLIES FOR BEE-KEEPERS—For Sale by Thomas G. Newman & Son, Chicago, Ills.

PRICES OF GUMMED LABELS,

As Shown on the two Preceding Pages.

As will be noticed, each Label is numbered, the numbers on the Labels corresponding with those in the following table of prices. All the Labels shown on pages 134 and 135 will be printed on white paper, either in black ink or in two colors, as desired. Orders must be for 250, 500, 750, 1000, 1250, 1500, 1750, 2000 and so on.

We can furnish these Labels with any changes in reading matter that may be desired; or we can make a complete change of matter for other goods, such as Pickles, Maple Syrup, Horse-Radish, etc., without extra charge.

The labels shown on the 2 preceding pages will be printed with your own name and address, on all where a name and address occurs, and gummed ready for use. The following prices are arranged by numbers corresponding with those underneath each label :

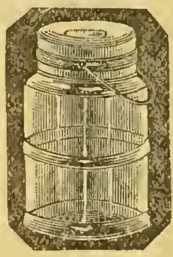
In Black Ink.

No. of Label.	250	500	1000
1	$1 00	$1 50	$2 00
2	45	70	1 00
3	45	70	1 00
4	1 25	1 75	2 10
5	1 25	1 75	2 25
6	1 00	1 50	2 00
7	1 00	1 50	2 00
8	15	25	40
9	25	45	75
10	45	70	1 00
11	1 25	1 75	2 25
12	75	1 25	1 75
13	50	75	1 25
14	1 25	1 75	2 25
15	1 00	1 50	2 00
16	75	1 25	1 75
17	45	70	1 00
18	25	45	75
19	1 00	1 50	2 00

In Two Colors.

No. of Label.	250	500	1000
1	$1 25	$1 85	$2 50
2	70	1 00	1 25
3	70	1 00	1 25
4	1 75	2 10	2 60
5	1 75	2 10	2 75
6	1 25	1 85	2 50
7	1 25	1 85	2 50
8	25	40	60
9	45	75	1 00
10	70	1 00	1 25
11	1 50	2 10	2 75
12	1 25	1 75	2 25
13	75	1 25	1 75
14	1 50	2 10	2 75
15	1 25	1 85	2 50
16	1 25	1 75	2 25
17	70	1 00	1 25
18	45	75	1 00
19	1 25	1 85	2 50

GLASS PAILS FOR HONEY.



These Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the appearance is unequaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they may be returned to and re-filled by the apiarist.

Prices: To hold		per doz.
1 lb. of honey,	per doz.	$1 60
2 lbs.	"	2 00
3 lbs.	"	2 50

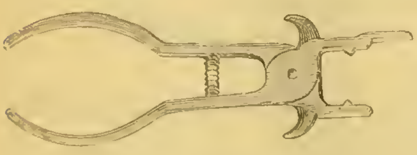
They are packed in barrels containing 12, 6 and 4 dozen of each size, respectively. Discount 15 per cent. on orders for those exact quantities.

Square Glass Honey-Jars.

One pounds, flint glass, per gross	$5 00
Two " " "	6 50
Corks for same, per gross	75
Tin-Foil Caps for same, per gross	80
Labels for same, per gross (name and address blank)	75

These Jars, at the above prices, will be shipped from Cincinnati, O. We will not be able to fill any more orders for common glass jars.

JONES' FRAME PLIERS.



For taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, has a long claw for loosening frames, and a hook which may be used to carry other frames besides the one held by the Pliers. Price, by express, 30 cts.; by mail, 40 cts.

Paper Boxes,

To hold a section of honey 4¼x4¼, or 5¼x5¼, for retail dealers. Prices, $1.00 per 100, or $8.50 per 1,000.

☞ Name and address of bee-keeper, and the kind of honey printed on 1,000 or less for 75 cents extra.

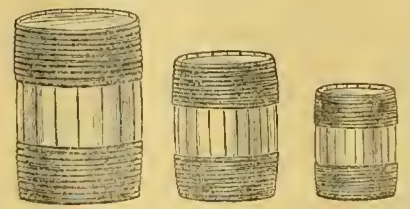
Metal Rabbets.

Any length, per foot	1c
For Langstroth Hives, 14 inches, each	1c

KEGS FOR EXTRACTED HONEY.

These kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be thoroughly scalded with boiling water before used. Do not soak them. Prices :

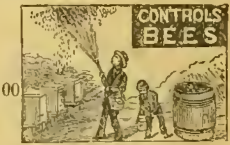
5 gallon kegs, holding a trifle over 50 lbs	40c
10 " " " " " 100 lbs	60c
17 " " " " " 175 lbs	80c



We make the following discounts on large orders—10 per cent. on 25 or more, 12½ per cent on 50 or more, and 15 per cent. on 100 or more kegs.

Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these kegs can be handled and shipped, with an actual saving in original cost, it is apparent to all that they are the best. Often a five or ten gallon keg of honey can be sold where a barrel might go begging for a customer.

Whitman's Fountain Pump.

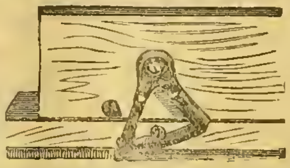


Price, by express or freight $8.00

BARNES' FOOT-POWER SAWS.

A complete illustrated catalogue and price list of these machines will be mailed free, upon application. Machines on trial if desired.

Hive-Clamps for Loose Bottom-Boards.



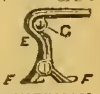
VAN DEUSEN.

VAN DEUSEN.

Sample set, by mail, ... 15c
By express, per set, ... 10c
☞ Per 100 Clamps (25 sets), $1.50 ☜

ACKERMAN.

Sample set, by mail, 20c
By express, per set,. 15c

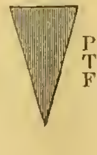


ACKERMAN.

Stanley's Automatic Reversing Honey-Extractor.

This extractor is now owned by Mr. E. R. Newcomb. We can supply these machines at the following prices : 4-frame, $20.00 ; 3 frame, $16.00 ; 2-frame, $12.00. These prices are for the Langstroth frame only, and they will be shipped direct to customers from the factory in New York. If you want one for a frame of any other size, you must send us a sample frame in order to avoid mistakes.

Tin Points, for Glassing Sections.



Put up in lots of 1,000, and sent by mail, postaid	50c
The same by express or freight	40c
From 5,000 to 10,000, by express, per thousand	30c

Square Tin Points at the same price as the above.

MISCELLANEOUS.

Little Detective Scales, ¼ ounce to 25 lbs		$2 50
Honey-Gate for Excelsior Extractor		75
Novice's Metal Corners, per 100		50
Wire-Cloth for Extractors, 3 feet wide, tinned, per square foot		15
" " queen-cages, tinned, per square foot		22
" 14 mesh, painted		08
Gearing for Honey-Extractor		1 50
Glass for Two-Pound Sections (5x6 in.), per box of 240 lights		2 50
Wire for Foundation, per ounce spool. 3c	by mail	05
" " " per 1-lb. spool, 35c	"	53
Handles for Honey-Gates, 25c	"	40
Novice Iron Blocks for making metal-corner frames, 15c,	"	25
Queen-Registering Cards, per dozen	"	10
Scissors for clipping Queens' Wings	"	50

HONEY AND BEESWAX MARKET.

NEW YORK, June 5.—There is no comb honey on the market, but a small stock of basswood extracted and California; new Southern extracted is arriving, but the quality is mostly inferior. We quote: Extracted basswood and California, 7c; Southern, 65@70c per gallon. Beeswax, scarce at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 19.—We received today the first shipment of new comb honey from Independence, Mo.—nice white 1-pound sections, put up in handsome white crates holding 12 sections each. It sells at 15@16c per pound. Extracted, white, 5@6c; dark, 5c. Beeswax, 25c.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, June 5.—Demand is now very light for comb honey, and will be for the ensuing two months. There is not much on the market, and very little of it is in desirable shape for the retail trade, being in supers and just as removed from the hive. Best brings 13@14c, and off-grades about 10c. Extracted, 6@8c. Beeswax, yellow, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, June 3.—Best white comb honey, 13@14c; other grades, 10@13c. Extracted, slow demand at 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, June 19.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, June 10.—Demand for comb honey is slow, and prices nominal. There is but little on the market. Extracted honey is in good demand at 5@8c, according to quality. We bought to-day the first 4,000 pounds of new extracted clover honey.

Beeswax is in good demand at 24@28c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

* * *

READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.

51D26t 1m1y.

Advertisements.

Dadant's Brood Foundation! CHEAP! Wholesale or Retail. Or will exchange for Comb Honey.

ST. JOSEPH APIARY,
27A1t ST. JOSEPH, MO.

Mention the American Bee Journal.

See What I Offer You! Imported Italian Queens, fair, $4; Select, $5; $1 less after Aug. 1. Choice warranted, home-bred Queens, $1; or 6 for $5; one doz., $9.00. This will not appear again. Take notice, and govern yourself accordingly.

27A1t **J. B. HAINS, Bedford, Ohio.**

Mention the American Bee Journal.

Tested Queens Cheap

During the Swarming Season. Prolific Queens, producing all **three-banded** workers, $1.00 each; 6 for $4.00.

27A2t **J. A. GREEN, Dayton, Ills.**

Mention the American Bee Journal.

Choicest Italian QUEENS! **Purely** BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

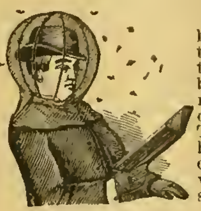
To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

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The netting of 60 dozens of these Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each or two for $1.10,** if ordered at the same time. They are practically just as good as ever, but slightly soiled. To secure these. **Order at once.**

We will send this Veil and the BEE JOURNAL one year, for **$1.50**; or we will give the Veil **FREE** for **two NEW subscribers** to the BEE JOURNAL—[or one for the BEE JOURNAL and one for the HOME JOURNAL] for one year, with $2.00 for the subscriptions.

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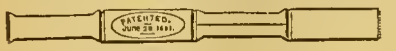

WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best. ☞ Write for prices.

Watertown, Wis., Jan. 1, 1890. 1Cly

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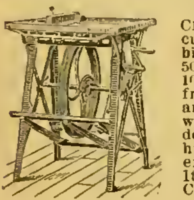

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

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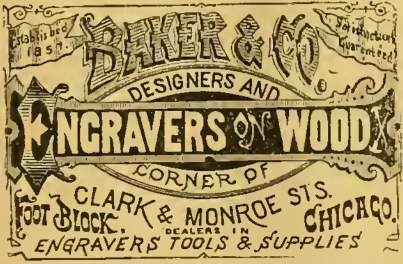

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My 22nd Annual Price-List of Italian, Cyprian and Holy-land Bees-Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. H. H. BROWN,
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THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

"Marketing," will be the Special topic of the August number.

The "Review" is Published monthly, at 50 cts. a year. Send for samples (free) and see if you can afford to be without it.

Address Bee-Keepers' Review,
W. Z. HUTCHINSON, Ed. & Prop. Flint, Mich.

23Ctf *Mention the American Bee Journal*

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Early Nuclei & Italian Queens.

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Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.75; or the two Journals and the Book for $2.50.

THOS. G. NEWMAN & SON,
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British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

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Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

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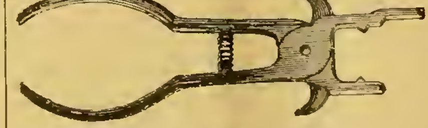

FOR **taking frames out of hives,** or moving them in any way desired. It is made of Japanned iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, **40** cents., by mail. By express, 30 cents.

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Established 1878.

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Wholesale and Retail Manufacturers of

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Price List Free. 9D1y

SECTIONS $3.00 per 1,000. Foundation, Alsike Clover Seed and Japanese Buckwheat, cheap as the cheapest. Special prices to dealers. Send for our FREE PRICE LIST. **M. H. HUNT,**
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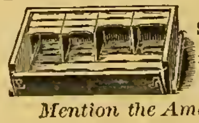

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BEES & QUEENS. Send for free catalogue. Address
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CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin	$ .40	$1.00	$ 1.75
" Untested	1.00	2.75	5.00
" Tested	1.50	3.75	7.00
" Select Tested,	2.00	6.00	10.00

Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.

NOTICE That my **FOUNDATION** is low in price, and high in quality. For Brood, 40c; for Sections, 50c per pound. Send for Samples.

24A4t **WILBER G. FISH, Ithaca, N.Y.**

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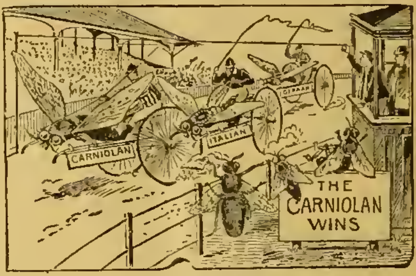


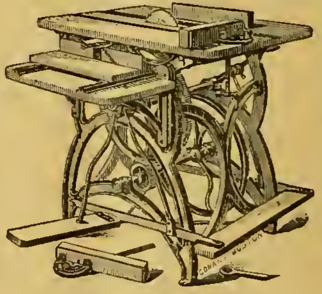
Hurrah for the **Carniolans!** They take the lead; win the race; secure the prize. If you want

TONS OF HONEY,

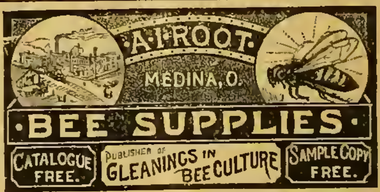
Try the Carniolans. Hardiest to winter; pleasantest to handle; best honey-gatherers. Our stock is the best that can be procured, and is bred miles away from other races.

PRICES: One Untested Queen, $1.00; 6 for $5.00; 12 for $9.00. One Tested Queen, $2.50. One Imported Queen, $3.50. THE BEE-KEEPERS' ADVANCE and an Untested Queen, for $1.25. **J. B. MASON,**
27Ctf MECHANIC FALLS, ME.

MARSTON'S Hand and Foot-Power MACHINERY



CIRCULAR Saw, Iron Frame, Steel Shafts, and Arbor's Machine-Cut Gears, Iron Center-part in top. Send for Circular and Price-List. **J. M. MARSTON & CO.,**
21C13t 75 Lenox Street, BOSTON, MASS.



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BEE SUPPLIES
CATALOGUE FREE.
PUBLISHER OF GLEANINGS IN BEE CULTURE
SAMPLE COPY FREE.

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JAPANESE BUCKWHEAT, 75 cts. per bushel; 15 cts. for bag. No. 1 Sections, $3.00 per 1,000. Comb Foundation very cheap Send for Price-List of 1890, free.

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ONE DOLLAR will purchase a Daughter of this wonderful Queen. Descriptive Circular free. Address,
AMERICAN APICULTURIST, Wenham, Mass.
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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI July 12, 1890. No. 28.

EDITORIAL BUZZINGS.

Plenty of roses in summer,
Plenty of flowers in June,
Plenty of sweet-bird music
That never is out of tune,
After so deep a gladness,
When our hearts are tenderly stirred,
No wonder we dread the winter,
With never a flower or bird.

◆

☞ In our next issue we shall publish the list of premiums offered at the Detroit Fair and Exposition, and the rules governing the same. It is crowded out of this issue.

◆

☞ The great Inter-State Fair will be held at Trenton, N. J., on Sept. 29 and 30, Oct. 1, 2 and 3. For premium lists address Jno. Guild Muirheid, Sec., Trenton, N. J.

◆

Poisoning Bees.—In the Montreal *Witness* of June 26, 1890, a correspondent asks :

> Can the law keep anybody from showering fruit trees with Paris green on account of honey bees, and is there any law for honey-bees ?

The editor of the Agricultural Department, the Rev. W. F. Clarke, very properly answers him thus :

> Surely no one would be so inconsiderate and foolish as to spray fruit blossoms with Paris green for the purpose of killing bees. These useful insects do no harm to fruit trees, but rather good, mixing the pollen, and so helping to fertilize the blooms. There is no law to prevent such an act, but people ought to have enough knowledge and common sense to abstain from doing anything of the kind. There is a law regulating the ownership of stray swarms, and an act has recently been passed in Ontario to prevent the spread of foul brood, but I think that is all the legislation we have respecting honey-bees.

The Detroit Fair and Exposition promises to be very successful this year. It will be held from Aug. 26 to Sept. 5. The management has just issued a circular from which we extract the following of interest to bee-keepers :

> The Apiary Department expects to make the finest display ever seen in America. The most noted bee-keepers of Canada and the United States are invited to compete, not only with their choicest colonies, but also with the finest honey and wax in all shapes,—hives, combs, implements, and everything pertaining to the business, for which the largest cash premiums are offered, and the best facilities for display are prepared.

Premium Lists may be obtained by addressing the Secretary, Geo. M. Savage, Detroit, Mich.

A letter just received from our friend, H. D. Cutting, who has kindly consented to make provision for the accommodation of the bee keepers at hotels, etc., reads thus:

> I was in Detroit two days last week, and have all arrangements made for bee keepers who may attend the Exposition. I have secured a good location. Applications for space begin to come in, and everything bids fair for a good exhibit.

◆

We Appreciate the following from *Gleanings* of June 15. It is an editorial on the matter of good feeling now existing between the apicultural editors of America. Bro. Root says :

> As Dr. C. C. Miller said recently, it seems as if the millennium of brotherly feeling and good-will were now among apiculturists. The AMERICAN BEE JOURNAL is always on time. We never saw one copy in all the hundreds that have come to us that was poorly printed—over-inked or under-inked. They are always a model in typographical appearance. We are in a position to know that it is not an easy thing to be out on time, nor to make every number of a periodical an exact duplicate of the others, typographically.

But few pursuits can show a better class of periodical literature than apiarists can boast of Not only is *Gleanings* a marvel of neatness, but the *Review*, the *Apiculturist*, the *Guide*, and the *Advance* vie with each other in the excellence of the matter presented to their readers, and also in clothing themselves in as attractive a garb of neatness as the printer's art can make them. The AMERICAN BEE JOURNAL wishes them all the prosperity which they deserve, and hopes that concord and good fellowship may mark every step in their onward course.

How different all this is to what existed 17 years ago, when the AMERICAN BEE JOURNAL came into the hands of the present editor. The few papers then in existence were very poorly printed, and the price-lists of supply dealers were a disgrace to the art of printing (as we stated editorially more than 15 years ago) ; then the reading columns of all the periodicals were filled with bitter criticisms and personal bickerings, making it very undesirable to readers generally. Now, all is peace and concord. Topics upon which we differ are discussed in a pleasant way, and progress and improvement keep abreast of the times, while strife and vain glory are relegated to the rear. May such good feeling long continue.

◆

To Keep a Promise should be a sacred duty—but there are times when such cannot be done, no matter what effort is put forth to accomplish it. Our Supply Department has been a notable example of this, in the past 2 or 3 weeks. The Business Manager (A.H.N.), relying upon a continuance of shipments from manufacturers of sections, frames, smokers, etc., in about the usual quantities, every day two—promised such things to our customers at such times as he felt sure of being able to send them. But, unexpectedly, some of them ceased to send us anything for 10 days (though implored to do so every day) claiming that they were obliged to fill other orders, to try to redeem their promises made to others, broken by the "unprecedented rush," though they ran day and night. This left us powerless to ship goods we had promised in good faith—and the *just* rebukes of our patrons almost drove us to desperation ! Several small shipments were received, but orders came faster than the goods. This week, we are relieved by several unexpected offers of goods (to help us out) and by the time this JOURNAL is in the hands of its readers, we hope to have caught up to within a day or two—and in the future be able to fill all orders promptly.

We hope that this explanation will prevent our suffering patrons from judging us too severely on our "broken promises."

The *worry* has caused both members of the firm great annoyance, and bad as some of our patrons must feel, we have suffered in mind and body as much as any one.

◆

☞ We are informed by one who knows, that the honey-house of N. N. Betsinger was *not* destroyed, as stated last week on page 443. It was, we presume, an exaggeration of reporters. We saw it in the Chicago *Herald*, the New York *Sun*, and in another paper, the name of which we do not remember. We now have full reports of the trial of Mr. Betsinger in the Syracuse *Courier* and Marcellus *Observer*.

We have no desire to misstate this unfortunate matter in any respect. The jury only took 20 minutes to decide upon a verdict of "guilty." Though that does not prove it beyond controversy, still it shows that very strong proofs must have been offered to them. It is but just to say, however, that Mr. Betsinger protests that he is innocent and that a conspiracy was formed against him.

He was defended by Lawrence T. Jones, one of the cleverest lawyers in the State. An appeal is made to the general term of the court for a new trial. If he *is* innocent, we hope it will be so proven—that the right may prevail.

GLEAMS OF NEWS.

Patents are generally the thing "most to be desired" by young bee-keepers. They think they must invent something in order to be brought to public notice. They never dream of reading up the literature or history of bee-keeping ; but, instead, they will conceive of something different from what they have been using—imagine that it is *new*, and then foolishly spend their money to get a patent on some discarded implement or device ; or, perchance, on something that may be in general use, but is not known to them. We commend to such the pithy remarks of friend A. G. Hill, in the last issue of the *Bee-Keepers' Guide :*

> Mr. Leonard Hopkins, of Maxwell, Indiana, has secured a patent on a supposed new bee-hive, May 13, 1890. The first claim is on a kerf in the top-bar, and also in the upper end of the side-bars for the purpose of securing a starter. This is a very common thing, and a great many have built frames in this manner for a number of years. The dovetailed Simplicity frames of wood are all made in this manner. The second claim is on a case for sections. The top case is clamped down to the lower case by metal hooks and eyes, a set at each corner. This makes it necessary to have three honey-boards, one at the top, one at the bottom, and one at the center, besides the sections are clamped sidewise in the usual manner with a wedge, and a glass side. The feature is new because we do not think any one ever before saw the necessity for clamping the upper tier of sections to the lower ones, and we fail to see it now. The two cases are not clamped or fastened to the body, nor is the cap secured in any such manner, so the hive cannot be designed to overcome the effects of wind storms. The third claim is an endeavor to tighten the grip on the second. Now it would seem better for those who get the patent fever on bee-hives, to first spend four or five dollars for bee periodicals and books treating on the subject, as it is possible that a better knowledge of what has been done, and what others have done, might be as good a cure as $75 spent for a patent for something already in use or not worth using.

◆

That Pioneer Apiarist, Mr. O. W. Childs, died at Los Angeles, Calif., on April 17, 1890. About 40 years ago he left Vermont and located in Southern California. Mr. C. N. Wilson, in the *Rural Californian*, gives this biographical sketch of Mr. Childs :

> He was very largely engaged in the nursery business for many years, and thousands of citrus as well as deciduous trees that now form extensive orchards in California, were his product. His palatial home on Main street, Los Angeles, surrounded as it is by an almost endless variety of fruit and ornamental trees, together with a superb collection of flowers, are all living witnesses of his singularly good taste and refinement.
>
> To him alone belongs the honor of bringing to Southern California the first hives of honey-bees. He purchased some in San Francisco, and brought them to Los Angeles, in March, 1855, setting them up in his nursery on Main street, about opposite to where he built his late splendid residence. The bees did well, and Mr. Childs sold his comb honey as fast as it was produced, for *one dollar per pound.* He remained in the business for a number of years, conducting it successfully, introducing everything that tended to improvement in the apiary. He manufactured the first honey extractor ever used in this locality, and introduced the first Italian queen-bees, paying as high as $100 each for them.
>
> He has left as marks of his business ability the structures he caused to be erected, notably his late residence, the Grand Opera House, and the fine building on the corner of Temple and New High streets. But the bee-keeping fraternity will long remember him as the amiable gentleman who brought the first honey-bees to Southern California, and for many years carried on successfully the first apiary established in this part of the United States.

◆

☞ The Indiana State Fair will be held at Indianapolis from Sept. 22 to 27, 1890. In Class 38, "Bees and Honey," we find the following in the premium list :

	1st.	2d.
Queen-bee	$3	$2
Comb honey, not less than 10 lbs., quality and manner of putting up for market to be considered..	5	3
Extracted honey, not less than 20 lbs., quality and manner of putting up for market considered...	5	3
Display of honey, the product of one apiary of the present year..	15	10
Display of wax, not less than 10 lbs........................	2	1
Display of apiarian supplies.......	5	3
Apparatus for the manufacture of comb foundation, to include all necessary articles for its manufacture, the owner to manufacture comb during time of exhibit	5	3
Comb foundation for use in brood-nest	2	1
Comb foundation for surplus honey	2	1
Honey extractor	2	1
Wax extractor	2	1
Honey vinegar, not less than one gallon	2	1
Section-box for surplus honey.....	2	1
Display of wholesale packages and crates for honey................	2	1
Display of retail packages for extracted honey	2	1
Collection of honey-plants, not less than 6 varieties, properly labeled in order, with date of bloom.....	10	5

◆

Barrels of Honey, it is said, were recently found in a bluff of ground in Franklin, Ky., and a leading Chicago daily newspaper gave the following account of it, and comments thereon, in its editorial columns, on July 2, 1890 :

> The industry of the little busy bee seems to lose force as a moral example when the profitless and unnecessary toil of a lot of Kentucky bees is considered. The home of these bees was a bluff 170 feet high near Franklin, and for a number of years they have been seen to emerge from a fissure near its top. It recenty occurred to a farmer that the bluff might be full of honey and, in company with a number of neighbors, he undertook to find out. A hole bored in the bluff completely corroborated his theory. It disclosed one of the most remarkable finds of honey ever discovered. Everybody for miles around has filled a barrel or two, and the farmers are supplied with honey enough to spread on their biscuits and sweeten their beverages for years to come. But the industry for which bees are lauded by the novelists seems to have been misdirected in this case. They produced an enormous surplus of honey which they could not use themselves, and which they intended nobody else should use—only to be robbed of it in the end.

There are many stories afloat concerning lakes of honey, etc., being found, which hardly ever materialize when they are sought. We do not give much credence to such newspaper yarns, though there may be a little truth in some of them.

◆

☞ The statement has been widely circulated, probably by parties who wished it might be true, that John B. Alden, Publisher, of New York, Chicago, and Atlanta, had joined the "Book Trust," which is trying to monopolize the publication of standard books, and to increase prices from 25 to 100 per cent. Mr. Alden sends us word that he has *not* joined the Trust, and there is not and never has been any probability of his joining it. The "Literary Revolution" which has accomplished such wonderful results within the past ten years, in popularizing literature of the highest character (no "trash" ever finds place on his list), still goes on. Instead of increasing prices, large reduction in prices has recently been made, particularly on copyright books by American authors. A catalogue (96 pages) sent free to any applicant. One of the latest issues from his press is "Stanley's Emin Pasha Expedition," by Wauters, a very handsome, large-type, illustrated volume, reduced in price from $2.00 to 50 cents. This work tells a most interesting and complete story, beginning with the conquest of the Soudan, and continuing through years of African exploration, the revolt of the Mahdi, the siege of Khartoum, with the death of Gordon, the return of Dr. Junker, besides the story of Stanley's own adventures, including his successful Relief Expedition. It is one of the best and most complete works issued upon the subject. Send Alden your address, and you will receive his 96-page catalogue, and from time to time specimen pages of his new publications. John B. Alden, Publisher, 393 Pearl street, New York, also Chicago and Atlanta.

◆

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

QUERIES & REPLIES.

The Amount of Dead Bees in Cellar-Wintering.

Written for the American Bee Journal

QUERY 716.—What amount of dead bees, consistent with fair wintering, might be found in a cellar where 100 colonies had been for four months?—Wisconsin.

Two bushels.—EUGENE SECOR.

Two bushels.—MRS. L. HARRISON.

Perhaps a bushel.—C. C. MILLER.

Half a bushel or more.– DADANT & SON.

A bushel or two.—WILL M. BARNUM.

One or two bushels.—G. L. TINKER.

From a peck to one bushel.—G. M. DOOLITTLE.

From one to two gallons.—J. M. HAMBAUGH.

Never having wintered bees in a cellar, I do not know.—M. MAHIN.

A bushel would be a liberal allowance.—C. H. DIBBERN.

It will vary from 2 gills to 4 quarts. Neither extreme need cause alarm.—A. J. COOK.

From one to two bushels, if the bottom-boards are off, so that the dead bees are all outside the hives.—R. L. TAYLOR.

There are so many different conditions to be taken into consideration, that it would be impossible to say just how many.—H. D. CUTTING.

Who can tell? In some cellars more would be found than in others. This question reminds me of the "old chestnut," viz: "How big is a piece of chalk?"—J. E. POND.

Sometimes more and sometimes less. I have known bees to winter first-rate where there were great quantities of dead bees upon the bottom of the repository, and the same when only a few were to be seen.—JAMES HEDDON.

It must depend a great deal upon the relative number of the old bees in each hive, as to what proportion of the colony will survive until spring. I believe that half of all the bees in my apiary die before spring opens, and yet, with the increase of young bees, gives me good, strong colonies to commence with.—G. W. DEMAREE.

A bushel, more or less, according to the age of the bees when placed in winter quarters.—THE EDITOR.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

CORRESPONDENCE.

HONEY.

How to Work to Get the Best Results.

Written for the American Rural Home

BY G. M. DOOLITTLE.

If we have been successful in working our bees for brood, so as to obtain a multitude of bees in the right time for the honey harvest, we are ready for the next step in working for honey.

This will be putting on the honey sections, or rather a part of them, for I contend that it is poor policy to give any colony (unless it is in the case of two prime swarms being hived together), all of the surplus room at the start, as such tends to discourage them, as they do not as yet have a sufficient amount of bees to take possession of so large amount of room. I generally give surplus room amounting to from 20 to 25 pounds at the start, and as the bees take possession of it, give as much more room, and finally the full capacity of the hive (60 pounds), when the force of bees increases so as to want it. However, as a rule, the swarming season arrives before all the sections are put on, when no more sections are added until the old colony gets a laying queen.

Always, in managing bees, the apiarist should have an eye on the future as regards his honey harvest, until the harvest arrives, and when it arrives, then bend his every energy for the time which is present. For instance, my honey harvest comes from basswood, or during the last half of July, so all my operations previous to this time, must be in reference to this harvest, or all my efforts will result only in failure.

Now the time of the bees' swarming has a very important bearing on what I get as cash out of the apiary. If they swarm too early, they defeat my plans, and if too late it is nearly as bad. The thing is to have them all swarm at the right time, which is brought about as nearly as it may be, by keeping back the strongest and building up the weakest. This is done by drawing bees and brood from the strong and giving to those which are weak, until all are brought to a uniform strength at the desired time of swarming.

But says one: "When is the proper time for increase?" to which I reply: "About 15 to 20 days before the main honey harvest." Why? Because this gives time for the young queen in the old colony to become fertilized, and not enough time to the swarm to get so strong as to desire to swarm again. Remember, I am talking exclusively of producing comb honey, for the producing of extracted honey requires a very different mode of procedure, in my opinion, and I have extracted as high as 566 pounds from a single colony in one season.

Nothing can detract more from our crop of comb honey than to have our bees get the swarming fever during the honey harvest, unless it is having them so weak at the time that they are of little or no value.

In the forepart of June one year I was accosted by a neighbor saying, "Have your bees swarmed yet?" No, said I, nor do I expect them to generally for the next three weeks. "Well," says he, "I guess you won't get much from them, for Mr. S. is having lots of swarms." All right, says I, I shall be glad to have Mr. S. get a good crop of honey.

Well, the result was, during the height of the honey harvest Mr. S. was having lots of swarms, which he was putting back, cutting out queen-cells, etc., in the vain hope to get them to work, while only now and then a swarm was issuing in my apiary, with the sections being filled as if by magic.

I have often said the getting of the bees in the right time for the honey harvest counts more toward cash and fun in the apiary than anything else, which is true, but next to this is the managing of those bees, so that they will be only bent on storing honey during the honey harvest; for the lack of either gives the apiarist only small returns for his labor among the bees.

After doing all in my power to get all swarms out between June 25 and July 4, I frequently get some as early as June 20, and as late as July 15. Those issuing before July 4 are hived on a new stand, and a part of the sections are put on two or three days after hiving, while the date of swarming is put on each hive, thus: "N. S. 6-22" being put on the swarm, and "Sw'd. 6-22" on the old hive, if that is the date.

On the evening of the eighth day I listen for a moment or two at the side of the old hive, and if swarming has been done "according to rule," I hear the young queen piping, when I know a young queen has hatched, and an after-swarm will be the result if it is not stopped. If no piping is heard, I do not listen again until the evening of the 13th day, for the next rule is that the colony swarmed upon an egg or small larva being in the queen-cell, which allows the queen to hatch from the 12th to the 16th day after swarming. If no piping is heard by the

17th day, no swarm need be expected. When it is heard, which will be in nineteen cases out of twenty, on the 8th day, I go early in the morning and take every frame out of the hive, shaking the bees off of each (in front) as I take them out and return them again, so I shall be sure and not miss a queen-cell, but cut all off, for we know that a queen has hatched.

This is a sure plan, while I have found by experience that none of the other plans given are sure of the prevention of after-swarms. The colony is now boxed to its full capacity, and if the queen gets to laying all right, it will produce a larger amount of comb honey than the swarm will. In 21 days from the time the swarm is hived, young bees will begin to hatch so as to reinforce that colony, so on the 23rd to the 25th day after hiving, I give the full capacity of surplus room to this also, which tends to keep them from having a desire to swarm again. In this way the very best results are secured, the same being what I have practiced successfully for years.

Borodino, N. Y.

* * *

BUSINESS.

Pertinent Suggestions About Ordering Bee-Supplies.

Written for the American Bee Journal

BY A SUPPLY DEALER.

I have been thinking of the fact that bee-keepers are compelled to enter the field of commerce. They have to sell their honey and buy supplies, and very many do so by correspondence. Would it not be a good plan if we should learn something of each other through the medium of the AMERICAN BEE JOURNAL, concerning commercial business as well as honey-producing?

I am a supply dealer as well as a honey-producer, and during the last two months my mail has averaged about forty letters per day. Let us now imagine my clerk at the desk, opening these forty letters, answering them, copying orders, etc.—a work which I am compelled to hire done, as I cannot always find the time to do it and superintend three apiaries and as much other business of a different character.

With an opener the clerk opens the forty letters; the first one contains an order for 2,000 sections, 15 pounds of comb foundation, etc. The letter is short, plainly written, especially the address, the shipping-point, and the name of the remitter ordering the goods. He tells how to ship (by freight or express), and if his post-office is different from his shipping address, he states so plainly in a few words on a separate line. When she finds nothing on that sheet, except that plain, complete and comprehensive order, she draws a sigh of relief; and, when looking into the envelope, finds no other sheets, no talk about the bee-keeper's bees, nor his flora, nor chickens, nor his admiration for some of our theories or goods, she draws another and still longer and pleasanter breath. The order is soon made out, and always without an error.

The next letter is withdrawn from the envelope, and a sheet of note-paper is written all over the four pages with a lead pencil, and reads something like this:

> Inclosed please find $6.00 for one of your bee hives. I have read about them, and I think they are the best hive there is. I have got your circular, but I do not know as I know just what I get for the $6.00. Send me the best you can, because I am a prominent bee-keeper here, and a good many people will come to look at the hive. I had a big swarm yesterday. My bees are mostly pure Italians. I think the pure bees are the best. Oh, yes, I add another 30 cents for one of your bee-veils, and if you can send a Parker foundation fastener by mail, send it right away, and I will remit. My little boy, 12 years old, loves bees, but he got awfully stung yesterday. Send directions how to use the hive, and if you can send two hives in the flat instead of one made up, you can do that. Direct the same as you did before. There are a good many other things I would like to write you about, but I am in a hurry, so good-by. Your friend—who loves the honey-bees,
>
> JOHANNES FIKES.

Now this friend may "love the honey-bees," and he may be a good "friend," although it is the first time we ever knew that we had such a friend, or that such a man as Mr. Fikes lived, but the clerk is not in love with his letter at all. She would about as soon open a dynamite bomb as such a letter.

Many dealers have suggested that all orders for goods should be on a separate sheet from all talk, and everything else not pertaining to business. I desire to carry this further still; I want to suggest to every bee-keeper that when making an order for goods, put nothing else in the *same letter*. Let the envelope carry nothing else. If you want to write to some man who is a central figure in the apicultural world, send him your talk in another envelope, at another time, and under another stamp; and when you do not receive any answer to it, wisely and pleasantly come to the conclusion that he did not have time to answer it.

What do you think of a bee-keeper who will ask a dozen questions and not even enclose a stamp or return envelope? No better nor more honest rule could be made among bee-keepers than to enclose ten cents in stamps for every question asked; then a lot of useless questions would not be asked, and those wisely selected and wisely answered, would be worth ten times ten cents per question to the seeker after knowledge.

A good business man, having a large trade, will not depend upon his memory for anything—not for five minutes; so those ordering goods should remember that if their order is the forty-ninth one of the season, it should be just as full and clear as though it was the first time the dealer had ever heard of him. Do not take it for granted that the recipient of your letters remembers anything about any former transaction—make your reference full and complete. Do not tell half of the story and think he remembers the other half. Tell it *all*. Do not write and say: "I have not received the goods I ordered from you yet. Did you ship them according to my directions, and if so, why are they not here?" Write in this way:

> On or about June 4 I ordered 2,000 sections of you, remitting $8.00 for the same by way of post-office order on the Fairhaven post-office. I asked you to ship to my address by freight to Fairhaven, and as twenty days have elapsed, and the goods do not arrive, I would suggest that you have a tracer sent after them.

Then comes a letter from Peter Funk, without any money in it, suggesting that we send him one of our hives for trial, and if it suits him he will pay for it, and besides all this, he is such a central figure and "mowing such a wide swath" in the apicultural line for miles around, that it will be largely to our advantage to ship him a hive. This is an easy kind of letter to dispose of, and greatly facilitates getting through with the day's work. It is answered with just one motion, and that consigns it to the waste-basket.

Let us do business on business principles, and let all remember that the dealer in bee-keepers' supplies who has any considerable trade, has hundreds of others besides ourselves to deal with. That if we bungle our letters with side-talk, it makes him lots of extra work, and subjects ourselves to danger of loss from mistakes. Besides that, there are very few dealers in the busy season, ready to consider anything in any one's letters except the order itself. Can we not have an improvement in this direction?

[We give place to the above because there are many good suggestions in it, which thousands of apiarists should ponder over. The name of the writer is withheld, so that it shall not give offense, or seem to be a personal complaint—instead of suggestions for the general good. We are glad to say that there has been a very marked improvement in the writing of orders during the past few years, and we hope that the foregoing article will stimulate to greater precision and more business tact in letter-writing.—Ed.]

SELLING HONEY.

How to Put Honey Upon the Market.

Read at the Ohio State Convention

BY H. F. MOORE.

Marketing our honey is one of the most important parts of the business; for if we fail in this, it is useless for us to raise large crops of honey, or to use great care in its production. Very little need be said about comb honey to the representative body of apiarists, and one might almost say upon any branch of practical bee-keeping. For we have here assembled the most enterprising and wide-awake of our Ohio honey-producers.

Experience has shown, time and again, that grocerymen and dealers pass by any honey that is daubed on the outside, or shows any broken comb through the glass. Yet these things will always continue to be, so long as freight men handle honey. The only solution that seems near by is to encase each section in a little pasteboard box made expressly for the purpose. Take a walk with me through the commission houses of any of our large cities, and you will see large quantities of comb honey marketed in that shape, and also that the breakage in necessary handling is much less. Their cost is trifling—less than one-half a cent each by the thousand.

I think if the bee-men who took his honey from the hive and boxed and shipped whole crates without even taking them apart to see if all were nicely filled, or scraping the sections to make them more attractive, could have heard the conversation between the commission merchant and the possible purchaser, and heard his honey offered at three and four cents per pound less than nice honey in glassed cases, he would have realized the object lesson more fully than by reading a whole volume of bee-literature.

Beauty in appearance is as important as excellence in flavor to the successful apiarist. If beauty and neatness are necessary with comb honey, they are no less important to extracted honey. As to the name extracted, I am not sure it is the best available. For we must take into account the effect on the ear of the prospective purchaser. On one occasion the writer told a gentleman he had some nice extracted honey for sale, and was met with the reply—that he wanted the *pure* article. Now many German people say "clear" honey, and this may be an improvement on the old word.

Many people are met who say "we never eat strained honey." On being asked to explain, they say it "tastes like molasses." But when a fine, heavy sample of white clover extracted honey is shown them, the instant decision is —"that is fine," leading to the inevitable conclusion that some of our bee-men in sending clear honey to market, have not always been careful to select well ripened white clover honey. For as a matter of fact, one hundred pounds of thin, strong, extracted honey will do any market more harm than one thousand pounds of an equal grade of comb. Why? Because everybody supposes that comb honey is made by the bees, but the extracted honey partly or wholly by men, and any imperfection in the same is immediately charged to the human agency, whether justly or not. To be plain, the general public is sure that lots of manufactured honey is on market. One gentleman in particular said thousands of pounds of *made* honey were sold every year in the cities.

When these people are asked to explain more particularly, they usually admit they guessed about it, and when the writer has explained about the different causes that make honey bad or unpleasant, they usually say—"well, may be that is so." No greater curse to the bee-keepers of our land can be imagined than the much-written-about *wily lie.*

The question to any one who sells honey is—"Do you rear bees?" and the assurance which we give them, that we have 150 colonies ourselves, makes it all right, and is a voucher for the quality of the honey. Occasionally men are met who will say, "Why, honey is made now-a-days so like the real, that you cannot tell it by smell or taste." Such a man is only worthy to be classed with one who does not believe he has a heart, nor that George Washington or Napoleon ever lived, and is consequently beyond reach of all argument. I do not refer to such, but to those great numbers of people who love honey, but having read in the paper that somewhere out West—perhaps Chicago—even comb honey is made, they are afraid to purchase anywhere for fear of getting some of that mixed stuff.

I am heart and soul with any movement looking toward the severe punishment of any one who adulterates clear honey, and thereby injures and disgraces those who follow a most honorable pursuit.

In marketing extracted honey, glass receptacles are evidently best. Those holding one-half pound, three-quarters, and a pound are preferred by the trade, as they can be sold for a small amount of money. Large quantities of honey are sold each year to the wholesale and retail druggists. Most druggists prefer to furnish their own receptacles, but if not, the quart Mason glass jar presents marked advantages on account of its holding just three pounds of good, thick honey. When crystallized it is far easier to melt a quart than a 60-pound can.

There is another method of retailing clear honey which promises to lead in the quantity that can be sold in a given time and territory. Take a quart Mason jar half full of white clover honey, and a nice one-pound section, if you please, and call at the first house on any street of any town you may mention. Rap or ring gently, and on seeing a member of the family, look pleasant and say, "Good morning" pleasantly, and without more ado say, "Don't you wish me to bring you some nice white clover honey this day next week?"

By this mode of address you surprise and please them; surprise them because in most cases they never saw a sample of honey brought to their door, and an order solicited; please them, because by your words you lift yourself clear from the dreaded agent or peddler. Then in a few words explain your price, size of package and day of delivery, at the same time inducing the possible customer to get a tea-spoon and taste the inviting and attractive sweet. Each family furnishing a clean tea-spoon for themselves, even the most particular have no objections. On the day appointed you take your load of honey and little book in which is recorded the name of street and family, and number of house, and deliver the honey to each family that has ordered.

These days for delivering occur say once a week, and are on different streets each time. In four or five months, or sooner, perhaps, give them all a call again, and your old customers will greet you with, "O, you're the honey man, ain't you? Why did you not come around before?" If you happen to have a big pocket in your coat, and put in a few cakes of nice beeswax—which your better half has kindly moulded for you in the family gem-pans—so much the better, for many families use beeswax to make the irons smooth, and in sewing carpet, and to make a salve. Also many a dentist will be glad of your visit, for a large amount of wax is used in mouth-fitting yearly.

Now in prosecuting this business, one must not think it is devoid of unpleasant features; such as some family mistaking you for a peddler and slamming the door quickly in your face; do not get mad, but rather pity the family who has thus been deprived of nature's choicest luxury.

Rockaway, Ohio.

MISSOURI.

The Season and Condition of the Bees—Queens.

Written for the American Bee Journal

BY J. A. MARSH.

I started this season with 13 colonies, one having absconded. Soft maple yielded honey on Christmas day. One colony built about 24 square inches of comb during January, in which they put the finest maple syrup I ever tasted. They did their own boiling (as there was none being boiled within 2½ miles), it being too clear for the work of man; also I had no hand in it, except tapping the trees. Did they "digest" the water out?

Fruit-bloom was scarce; Gill-over-the-ground short on account of floods, but red-bud, black gum, buckeye and honey-locust were good. Then white clover was fine for about two weeks. Horse-mint and sumac gave some surplus, when basswood, of which there are but few trees in this locality, was very fine. My experience concerning the best honey weather is the same as last year, that is, wet and cool—not clear, hot and dry, as most bee-men seem to think—at least in this locality.

We have had very little cool, wet weather here, also very little surplus honey. I have had 15 swarms, the first on May 22, earlier than any of my neighbors by two weeks. Swarming has been backward and very moderate.

QUEEN-CELLS—JUST-HATCHED QUEENS.

On page 430, Mr. Doolittle gives good advice about queen-cells and just-hatched queens, but if he will divide when the colony is nearly ready to swarm, and honey coming in freely, he may place sealed or unsealed queen-cells between the combs of a full colony or a two-frame nucleus immediately after removing the old queen from the full colony, or after forming nuclei from colonies having queens, without fear of loss.

I introduced in May, when all my colonies seemed bent on swarming, and when honey was coming in freely, seven queen-cells from an Italian colony; two were introduced to full colonies, and five to two frame nuclei. All except one hatched—the one which failed was chilled, as there were too few bees on the combs to protect it and the brood; however, they fastened it to both combs, and did elaborate work all over it until it appeared to have been built there. I cut it out three days after it should have hatched, and found it dead. All my bees except two were blacks, with a possible trace of Italian blood, and having black queens, knowing my introduced cells would hatch before others which they might build, I paid attention only to those introduced until finding them hatched would hunt them up, and I know they were Italian, and that they came from the introduced cells. Possibly I should add that these cells were not all ripe—one of them was not sealed.

I have had cells torn down, but under different conditions from this lot, which was the extent of my efforts this year.

I will ask Mr. Doolittle to be considerate enough to try it when he finds the conditions favorable. I do not want the money he offers, but if he were my near neighbor, I should certainly undertake to demonstrate these facts with his bees.

My bees have now nothing except winter-grape bloom to gather honey from, and in only mornings and evenings. The weather is very dry, the mercury being at 104° in the shade on June 26.

Scotia, Mo., June 28, 1890.

BEE-TALK.

Heat for Hatching—Stimulative Feeding, Robbing, Etc.

Written for the Massachusetts Ploughman

BY L. F. ABBOTT.

We should keep in mind the fact that the eggs of a queen-bee are developed by heat just as are the eggs of a fowl. Instinct leads the queen to restrict her operations of egg-laying according to the number and facility of workers to maintain the proper degree of heat to develop the eggs. With much waste room in the hive when put upon the summer stand during the cool days of April, but narrow circles of brood will fill the center of these on three combs until such time as sufficient heat by increase of numbers of bees and outside temperature, will warrant the queen to extend her operations.

Heretofore, we have made provision for ventilation. This is unnecessary now—in fact, just the opposite course should be pursued, and every crevice should be closed, and the quilts tucked down around the frames with other material added, so that none of the heat generated by the climate can escape.

These conditions may be maintained with the differences of adding, about the 10th of May (perhaps under some conditions, earlier and again late) frames containing empty combs, or better, containing some capped honey, which should be uncapped. When eggs and brood are found on both sides of all the combs, the center ones being pretty well filled, and a third of the space occupied in the center frames, it is well enough to add one or two empty combs, according to the strength of the colony.

I should not recommend to the novice under all conditions, to place the empty combs in the center of the brood-nest, as is frequently advised. If the condition of the brood is as given above, and the outside frames only partially filled with brood and eggs, these (if the hive seems to be quite well crowded with bees) might be placed in the center of the brood-nest, and the empty combs placed each side of these. A colony increasing so the queen has pretty fully occupied four frames, will soon widen out her operations, and when fruit-bloom arrives, find herself looking carefully over eight or more frames; but much depends upon the season.

FEEDING BEES IN THE SPRING.

I am frequently asked if I favor stimulative feeding in spring. I do under certain conditions. Strong colonies will be benefitted by the practice if judiciously fed, while weak ones will be injured. I feel pretty confident that it is harmful to feed any colony when the weather is good—part of the time it is so cold that the bees cannot fly out pretty much all the day. This would not apply with the same force to the method of uncapping sealed honey within the body of the hive, but applies more particularly to feeding liquid honey or syrup from the top of the frames.

Stimulative feeding in April in this latitude has done more harm than good. Last year many days in the first part of May were so cold that bees could not leave their hives, only for a short time in the middle of the day. It is such weather when brood-rearing is under way, which retards the increase of workers, thousands from all the hives becoming chilled to death.

A plan I have found convenient for feeding, and answering another purpose, is to have a feeder made with compartments; mine have five of these, and the feeder is as long as the frames and wide enough to cover seven frames. Spaces are left so that the bees can come up to each of these divisions—even one or all can be used, as is needful. These feeders are about 2½ inches high, and will hold, when filled, 10 or 12 pounds of syrup—convenient in fall feeding—or as small amount as one chooses may be placed in a single part. Bee-space is left under the whole bottom of the feeder, so that the bees can pass freely over the tops of the frames beneath the feeder; thus taking the place of Hill's device to that end.

I place one of these feeders upon each hive when putting in order for winter in the fall, and any colonies which seem to be likely to be short of stores, may have a few pounds of sugar syrup put into the central apartments of the feeder, and the bees will always cluster up inside and into the passages of the feeder, if wintered in the cellar.

After carrying the hives out-of-doors in spring, and looking them over, removing the dead bees and clippings of comb from the bottom-board, re-arranging the brood-nest, etc., if the number of frames left with the two division-boards are not as wide as the feeder, one or more division-boards, as the case may be, to make the whole wide enough, are placed close up to the side ones, the feeder placed on and quilts and other packing material tucked snugly around the whole. This done, the hives will not need looking after for two or three weeks, if it is known the queens are right, which should be one of the first things to observe in overhauling the hives.

If queenless colonies are found, no delay should be made in sending to some bee-keeper farther South, and procure a laying queen and introduce at once, with the usual precautions. But usually there is not much trouble in having a queenless colony accept a queen in early spring.

ROBBING IN THE SPRING.

One should be on his guard against robbing in spring. Prevention is much easier than cure. There is generally the most trouble from robbing early in spring before the blossoms have put out very much, and the bees have little to do but to "nose around" and kick up a bobbery with their neighbors. Generally, if the entrances are closed so as to admit only two or three bees at a time, and kept so from the time they are first put on the stands, till blossoms appear quite freely, and the bees find something to do, most colonies will defend themselves against intruders, till blossoms in field and forest call attention elsewhere.

Livermore Falls, Maine.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

MINNESOTA.

Our Winged Servants and the Basswood.

Written for the American Bee Journal

BY BRITANIA J. LIVINGSTON.

On page 310 I wrote about our early honey-flow. After May 2, the weather changed—cold rains with high winds set in, and, by June 1, the bees had consumed all the extra stores, and could barely live. I fed mine at times, all through June up to the 25th.

The country is yellow with mustard—the result of flax-culture for the past three years, but, until the past week, there was but little chance for the bees to leave the hives, as it rained so much. Four days the past week the mercury has stood at 90° and 95° above zero. It has not rained until to-day, and our winged servants have been busy and happy.

I wrote before that my 8 colonies came through the winter finely. My husband bought a "barrel of bees" of a neighbor in April, paying $4.00 for it. That made 9 colonies, spring count. That "early honey-flow" gave them such a start that I now have 20 colonies. Three of them are after-swarms, but all have now fine laying queens from my best yellow colony.

The first swarm was cast on May 27. Spring opened so fair I thought that I would amuse myself by a little experiment at queen-rearing. On May 12 I had a frame with ten fine queen-cells ready to hatch—but, alas, the weather was so unfavorable that I did not dare to make nuclei, as I had no bees to sacrifice on my experiments, and so I closed the hive with a sigh, and trusted to the "survival of the fittest" to mother the experimental hive. She proved a beauty—the yellowest and largest queen I have yet seen. She commenced laying on May 25, which we think is doing well for Minnesota. I am only three miles from the south line of this State. So my advantages are more nearly like those of Iowa, for bee-culture, I suppose, than Minnesota.

WORMS ON THE BASSWOOD.

Some correspondents reported the worms destroying the basswood at Alexandria last year. Now they are reported at Mankato. When I read that they were so near, I went out to look over our grove. That was June 1, and I could find one here and there, munching away on a very large basswood leaf.

We have had so much rain that vegetation is very rank. It does one's eyes good to see the buds on our basswood trees—they are so thickly budded, and just beginning to open on a few of the trees.

Our country is prairie, with a narrow belt of timber along the lakes, running three miles north of this place, and as far south. We are nestled down—the bees and I—on the east side of the trees. If we do not prosper here in our new venture, it will not be Nature's fault. She has done her part.

Centre Chain, Minn., June 29, 1890.

A REVIEW.

Past Experiences and Present Prospects for a Crop.

Written for the Michigan Farmer

BY GEO. E. HILTON.

Taking into consideration the open winter, the season thus far in Michigan, and in fact nearly all over the United States, has been discouraging. The open winter induced breeding, and a consequent unusual consumption of stores. This condition kept the intestines of the bees constantly loaded so that were they confined to the hive a few days they suffered more than they ordinarily would in as many weeks. This accounts for so many colonies dying after spring had fairly set in.

Fruit bloom was abundant, and lasted a long time, but the atmospheric conditions were not favorable to the secretion of nectar; then we have lost millions of bees at a time when we can illy afford to, by the ignorant, yes, and malicious spraying of the trees while in full bloom. Of course the intelligent fruit-grower knows it does no good to spray the trees until about the time the bloom is falling, and at a time when the bees have fulfilled the mission the Creator intended for them. I know of no other way to educate the ignorant and malicious than to demand legislation for the protection of our property.

I notice some of our supervisors and boards of review have no conscientious scruples about levying even an enormous tax upon us. I paid taxes on an assessment of $950 on 100 colonies the past season, and hold the receipts in proof. Are we then not entitled to protection? I say yes, and shall expect at our next State convention to see measures taken to secure it.

Since fruit bloom I never saw such a dearth of nectar. Vegetation seemed to suspend operations, and now at this writing, June 20, the raspberry, blackberry and white clover are all upon us at once with only half as many bees as a rule in the hives as there should be, and would otherwise have been to gather the harvest. Many colonies have starved or dwindled during the

the latter part of May and the first of June. In some parts of Iowa, Illinois, Ohio and Kentucky whole apiaries have been swept away by devastating floods. New York and adjoining States have suffered heavy losses from cellar wintering, and on the whole a dark cloud covers the horizon of the bee-keeper.

But do not be discouraged ; it has a silver lining. The markets have not been so denuded in years ; the demand for honey is upon us before we have it gathered ; quick sales at good prices are a stimulus to do our best. Let us double up our sealed brood and make one good colony from two medium ones. When they swarm give the brood to weak colonies having a queen, and before the season is half gone we will have our colonies strong, and a fair crop of honey, with but little outlay for hives and fixtures. Never mind the increase ; get the honey first, then if you must have increase, make it later. I know this is not a policy stand-point for a supply dealer, but I believe it will bring the greatest good to the greatest number. So let us trust in God, friends, and keep our dishes right side up, and He may yet send us such a flow of honey that we will be put to our wits' end to care for it.

Fremont, Mich.

SWARMING.

Preparing the Hives, Hiving the Swarms, etc.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

The exact time for the issuing of a swarm cannot be determined with certainty. If on the morning of a still warm day, when honey is coming in freely, few bees are seen to leave the hive. When bees from other hives are freely flying, a swarm may confidently be expected ; but let the weather suddenly change, all preparations for swarming may suddenly cease, even after their haversacks are packed for their journey.

Everything should be in readiness for the hiving of swarms, and soon as they rre clustered. Hives should be clean, and free from disagreeable odors, and be cool; if the hive has been setting in the sun, and very hot, bees may leave it. The old custom of washing out the hive with salt water and apple leaves may not be necessary, but the bees no doubt enjoyed the delicious freshness, and coolness.

When I hive a swarm, although the hive may be clean, I prefer to dash in a bucket of cool water, to rinse out dust that may have accumulated, and give it an air of freshness. At one time, I had a swarm repeatedly leave its hive, day after day, until it grew monotonous ; the hive was clean, and as I supposed all right, but leave it they would. I grew desperate, and hived them in another hive, and they remained.

The thought struck me that I had better see why those bees swarmed out. The hive in question had never been used before, and the flight entrance extending across the front of the hive was so small that the bees could barely enter, and the bees swarmed out rather than smother. They did not want to leave, but clustered day after day. Those who hive their swarms in clean, cool hives, with sufficient ventilation, and protect them from the rays of the sun, will have few tales to tell of swarms absconding; bees know when they are well treated, and appreciate it.

CONVENIENCES FOR HIVING.

Bees will cluster on a limb of a tree, which can be either cut or sawed off, carried to a hive and the bees shook off, which they will enter. But it is not always poetry like this ; there are other contingencies that we must be prepared to meet, like swarms clustering in the tops of high trees, or on their trunks where they cannot be dislodged, on fences, grape stakes, etc. Sometimes the cost of hiving is more than the swarm is worth, provided there are no conveniences at hand, to lighten the labor.

Mr. Manum, of Vermont, has my thanks, and should have those of all women, for his contrivance for hiving swarms. It consists of a wire basket attached to a long pole, which is light and convenient. By standing on a chair, I have been able to reach swarms with it, that I could not possibly have saved without the aid of ladders. By placing the basket under the cluster, and giving it a sudden jar, the bees fall into it. As the queen is generally on the outside of it, many times she will be secured, and by standing the basket near, the rest soon follow. A peach basket fitted on the end of a pole, would many times prove a blessing.

When many bees are kept, low-growing trees, like peach and May cherries, are a desideratum. Large forest trees are not desirable. I know a farmer who keeps his bees near a large oak, and his children told me that they had hard work to get the bees down from it, and now when they see a swarm issuing, they throw water to wet their wings so they cannot fly so high.

Peoria, Ills.

CALIFORNIA.

Honey-Producing Plants and Trees in the Sierras.

Written for the California Rural Press

BY S. L. WATKINS.

Nowhere, perhaps, in the world is there a greater diversity of honey-producing plants and trees than in the Sierra Nevada mountains. Here thousands of bee-flowers bloom in lavish abundance ten months in the year, thus giving the bees, as it were, almost a perpetual feast.

Long after the bloom of the valleys and foot-hills have ended, the wild bees of the mountains rove and revel through these virgin wildernesses, which furnish a floral chain of successive bloom. The inviting openness of the Sierra woods is one of their most distinguishing characteristics ; here and there the woods are diversified with countless garden openings or wild meadows, many of which are perfect paradises for bee-keepers.

A description of Pea-Vine Valley, which I visited in 1887, will not come amiss here :

After traveling several hours through a heavily timbered section of country, the valley itself suddenly burst on our view like a scene of enchantment; on either side lofty mountains arose, inclosing it like a frame—and what a splendid frame they compose, those colossal mountains in their rich variety of form and coloring—here shining out like molten silver, there changing to a dark bronze, covered lower down with various shades of green ; and with the crimson and purple and violet, and bright yellow, dazzling white, and azure, of the millions of wild roses, ceanothus, rhododendrons, flowering dogwood, and other flowering plants, from among which arose the stately sugar-pines, fully 200 feet in height, with their majestic green turbans towering like Sultan's heads above the luxuriance of the surrounding forest.

Numerous wild bees hummed and quivered around the scented blossoms, imparting a cheerfulness to the wild scene. Humming-birds, resplendent in their gorgeous colors, shot through the air like animated fragments of a prism. The air was spiced with the pungent odor of a thousand aromatic shrubs and plants, and seemed to exhilarate and give new energy to all who breathed this perfumed air.

Every tree, branch and shrub was a perfect mass of bloom and blossom, and in the clear, elastic atmosphere was fairly sparkling in its own vivid glorious coloring. Here we found growing in tropical luxuriance and beauty, thousands and millions of cardinal flowers, snowdrops, lilies, lupines, larkspurs, verbenas, pennyroyal, fireweed, virgin's bower, honeysuckle, columbine, California poppy, Indian cress, jewel weed, wild buckwheat, collinsia, wild mustard, Mexican clover, snow-plants and hundreds of less conspicuous honey-plants.

A small, silvery stream wended its way through the valley; it was margined with a thickset growth of black alders, willows, maples, wild plum and cherry, buckthorn, and several different varieties of dogwood; while occasionally here and there arose the surpassingly beautiful madrona tree. Higher up the valley we found a small lava field destitute of trees and shrubs, but clothed with a carpet of golden compositæ clover, and several different varieties of mint.

At the base of the mountain we found growing chestnut oak, live oak, California lilac, manzanita, chaemeiss, adenostana, beds of dwarf pholx, hulsea, potentille, and golden-rod; while looming far overhead were groves of arrowy silver firs and incense cedars, rich in both pollen and honey-dew.

This valley would be a very paradise for bee-keepers, but it is no exception; there are thousands of others like it in the upper Sierras, which are as yet almost untouched, save by wild bees. From 4,000 to 5,000 feet elevation is the grand bee-zone of the Sierras. The climate at this elevation admits of the making of permanent homes, for here are successfully grown the best of apples and pears. Peaches, plums, cherries, grapes, and numerous small fruits thrive well. Melons, pumpkins, tomatoes, potatoes, corn, etc., grow to perfection.

ROTATION OF CALIFORNIA BLOOM.

The black alder is the first honey and pollen producing tree of any importance in early spring. In our section it generally commences blooming about the first of January, and furnishes a profusion of bloom for about two weeks.

The various species of willows next make their appearance, and furnish an unlimited quantity of pollen for brood-rearing. Some seasons, willows yield considerable honey.

Manzanitas begin blooming about the first of February. They are excellent honey-yielders, and if we had the number of bees in the hives that we have about the first of June, to work on the manzanita bloom, we should get considerable honey from that source. Chaparral, in certain seasons, yields considerable honey and pollen. It blooms at about the same time that the manzanita does. Possibly if it bloomed before or after the manzanita, the bees would pay more attention to it.

Wild plum and cherry commence blooming about the first of April, but the bloom is of such short duration that I am inclined to believe that they do not get much honey from it.

The various species of maples commence blooming about the middle of April, and bees reap a rich harvest from this source. The bloom lasts for about two weeks.

Dogwood commences blooming about the same time, but it is not much of a honey-yielder.

California lilac begins blooming the latter part of April, and furnishes a vast profusion of bloom. The honey gathered from this plant is of an excellent quality and of a sparkling clearness. California lilac is one of the most important honey-yielders of the Sierras. The bloom generally lasts about three weeks.

Wild coffee yields considerable honey; it commences blooming about the first of May and blooms about six weeks. The honey from this source is dark and of inferior quality.

By the middle of May, plant-life has fairly reached its hight; then the upland meadows are painted with the various colored blooms of the larkspur, meliotus, collinsia, verbena, lilies, lupines, clover, monardella, wall-flowers, Indian cress, etc., all of which are excellent honey-plants. This ocean of bloom of the various wild-flowers lasts about a month.

About the middle of May the folocio *(Chamœbatia foliolosa)*, a little shrub with a fern-shaped leaf and a little white blossom, somewhat resembling the strawberry blossom, begins to bloom. It is a splendid honey-plant, and yields large quantities of honey every season.

The wild snow-drop begins to bloom about the first of June, and sends the bees out in large numbers early in the morning; it continues to bloom for over a month.

The wild holly and California buckeye furnish considerable honey in certain seasons. One season I obtained almost 50 pounds to the colony, of holly honey.

In July and August, the various species of mints keep the bees busy the entire day, and furnish enough honey to keep brood-rearing going on lively.

In September, a species of hartshorn furnishes considerable honey. The different species of golden-rod commence blooming in September, and furnish a profusion of bloom until frost comes.

In October, the incense-cedar furnishes vast quantities of honey, and keeps the bees roaring as if they were robbing instead of honey-gathering. The honey gathered from this source is splendid; it has a greater density than any sage honey, and it never candies. When bees are gathering this honey, they cap the cells with wax of a snowy whiteness, which gives the honey a very beautiful appearance. It is impossible to extract this kind of honey, as the density is so great that the combs would be torn to pieces before it would come out. I have had colonies of hybrid bees that stored 150 pounds of comb honey in six weeks, all gathered from this source.

The bee-pastures of the Sierras are better, all things considered, than those of the southern portion of California. The dry seasons do not have as much effect on the bloom here as there; we never have occasion to feed bees; they always gather sufficient to winter on.

Grizzly Flats, Calif.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec, Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Swarming Late—Storing Honey.

Bees are in good condition here this year, but swarming is late. I started with one colony last year, and this year I bought 2 more—now I have 7 strong colonies, some of which are storing honey, and some are not. I had 2 swarms on June 24.

BERT VIAGER.

Moline, Ills., June 27, 1890.

Poor Season in Washington.

I have lost 8 colonies of bees this winter, and those left have not swarmed yet. They are are two months later this year than last year. Too much rain is the trouble, I think. After 25 years of work among the bees, I feel somewhat discouraged, but I will not give it up yet. I am glad the editor reminded me of Rev. L. L. Langstroth. I sent him a letter to-day. Wake up, bee-keepers, in this important matter

JOHN BOERSTLER.

Vashon, Wash., June 25, 1890.

Colonies Strong in Bees.

Bees have wintered well here both indoors and out. The colonies are the strongest I have ever seen them Drones were flying on May 1, and bees commenced to swarm on May 20. It is a month, or more, earlier than usual. J. M. Carritt.

Ute, Iowa, June 28, 1890.

Very Little Honey Gathered.

My bees are doing nothing as yet. I have some colonies not as good now as when I took them out of the cellar. We have had about a week of nice, warm, dry weather, and white clover is in full bloom, but very little honey is gathered. Most of my fellow bee-keepers are in the same fix, so far as I have talked with them. This is the fourth season that has been almost a failure. David H. Wright.

Madison, Wis., June 30, 1890.

Large Crop—Alfalfa Clover.

The honey crop here will be large. Since the introduction of alfalfa clover here, bees do well. I fear the market will be overstocked. This dry climate is good for fine white comb honey. H. E. English.

Greeley, Colo.

No Honey from White Clover.

The honey crop will be a failure here. White clover furnished no honey, and if the fall flowers do no better, bees will not get enough to winter on. The cause is too much rain. L. Highbarger.

Leaf River, Ills., July 1, 1890.

Large Honey Crop Expected.

I shall look for the largest crop of white clover honey that I ever obtained, if the weather continues favorable, as my bees have begun storing in the sections, and there has not been so much clover bloom here for five or six years as there is now; but my bees are a little behind in breeding up, owing to the excessive cold rains between fruit-bloom and the beginning of the clover bloom. A. Wortman.

Seafield, Ind., June 16, 1890.

Colonies Weak and Starving.

Bees in this part of the world are very weak. We have had a very wet and cold spring, and until within the last few days bees have been starving, or about so. I have been feeding for a long time. I have about 240 colonies, and am in hopes of getting some honey after a while.

W. J. Pickard.

Richland Center, Wis., July 1, 1890.

Hybrid Clover.

Friend Newman:—Enclosed you will find some clover, which I plucked along the roadside to-day. As you will see (if not too badly wilted) it is a cross between the red and white clover; the stalk growing and stooling about as rank as the red clover, while the blossom, which has a red tinge, resembles the white clover. This must have been crossed by the bees, while gathering honey and pollen during the previous year from the red and white clover. If such clover seed could be gotten, I think that it would be the coming clover for bee-men, if not for stock-feeders, as it produces about as much fodder as the red clover. and at the same time producing a smaller blossom, resembling that of the white clover, from which the honey-bees no doubt would gather great stores of honey. Now, what shall we name this new variety of clover? Can you give it a suitable name? Since writing my letter on page 332, it has been very cold and windy here, but at present it has changed for the better. White clover is in full bloom, and the bees are working with full force. Geo Frey.

Geneseo, Ills., June 2, 1890.

[Alsike clover (*Trifolium repens*) is a hybrid between the red and white clovers, possessing qualities common to both, and the flowers are a distinct light pink. May not the flowers you sent be Alsike clover? They appear much like it, though wilted and dried. This letter would have appeared several weeks ago, but was mislaid during the rush of June.—Ed.]

Keeping Bees for Profit.

I handle bees for recreation and the profit I derive from them. I obtained 1,500 pounds from 11 colonies last year. I have at present 20 colonies in excellent condition. They are now storing honey very rapidly from basswood. It is very plentiful in my neighborhood. It, white clover and the fall asters are my staple honey-plants. Golden-rod yields honey here. R. B. Schofield, M. D.

Newark, Mo., June 24, 1890.

Bees have been Nearly Starving.

Bees are doing well now in this vicinity, but they have been on the border land of starvation — brood-rearing, from lack of stimulative feeding, had ceased. The cold, wet weather is what gave us, who did not keep the queen busy, the set-back. There is but little swarming yet.

George Spitler.

Mosiertown, Pa., June 29, 1890.

Bees Doing Splendidly.

I am a beginner in the bee-business. I started with 13 colonies the past spring, and have 21 now; they are doing splendidly. I have seen the American Bee Journal, and the first dollars' worth of honey I have sold goes to pay for it for a year, for I need it badly.

S. A. Davenport.

Roseville, Ills., July 1, 1890.

Our Clubbing List.—We have now made arrangements with publishers of metropolitan Weekly Newspapers, by which we can club them at the very low prices quoted in the **LAST** column, without premiums. The regular price of both is given in the first column. One year's subscription for this Journal must be sent with each order for another paper:

	Price of both.	*Club.*
Chicago Inter-Ocean	$2.00	$1.75
Chicago Times	2.00	1.75
Chicago Globe	2.00	1.75
Chicago News	2.00	1.75
Chicago Herald	2.00	1.75
Philadelphia Practical Farmer	2.00	1.75
New York World	2.00	1.75
Toledo Blade	2.00	1.75
The Lever (Temperance)	2.00	1.75

☞ Clubs for anything in our Premium List may be for either of our Journals, or for any number of either or both of them.

HONEY AND BEESWAX MARKET.

NEW YORK, June 5.—There is no comb honey on the market, but a small stock of basswood extracted and California; new Southern extracted is arriving, but the quality is mostly inferior. We quote: Extracted basswood and California, 7c; Southern, 65@70c per gallon. Beeswax, scarce at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 19.—We received to-day the first shipment of new comb honey from Independence, Mo.—nice white 1-pound sections, put up in handsome white crates holding 12 sections each. It sells at 15@16c per pound. Extracted, white, 5@6c; dark, 5c. Beeswax, 25c.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, June 5.—Demand is now very light for comb honey, and will be for the ensuing two months. There is not much on the market, and very little of it is in desirable shape for the retail trade, being in supers and just as removed from the hive. Best brings 13@14c, and off-grades about 10c. Extracted, 6@8c. Beeswax, yellow, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, June 3.—Best white comb honey, 13@14c; other grades, 10@13c. Extracted, slow demand at 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, June 19.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, June 10.—Demand for comb honey is slow, and prices nominal. There is but little on the market. Extracted honey is in good demand at 5@8c, according to quality. We bought to-day the first 4,000 pounds of new extracted clover honey.

Beeswax is in good demand at 24@28c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

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☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

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☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t Imly.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, post-paid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

Quick Work.—I received the Globe Bee-Veil to day, and I am well pleased with it. I am also very much pleased with the quick delivery of goods. I received them in two days and a half after the money was sent.—Bert Viager, Moline, Ills.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

I **STILL** have on hand about 20,000 strictly choice, No. 1, smooth, white, **SECTIONS.** Size, 4x5 and 5x6x1 15-16—open top and bottom. Price, $2.00 per crate—$3.75 per 1,000
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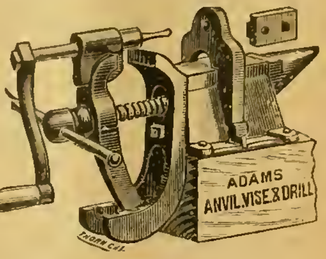

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The Drill Attachment can be put on or taken off instantly. Farmers especially will find it of great convenience to be able to drill a hole through a piece of Iron without making a trip to town. The Anvil and Vise combine strength and durability, the whole making one of the most complete and useful tools. Width of Jaw, 1¾ inches.

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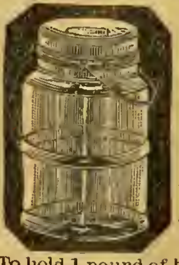
246 East Madison Street, - CHICAGO, ILL.

ITALIAN QUEENS From Best of Stock.

Tested, **$1.00** each; Untested, **75 cts.**
Address, C. A. BUNCH, Nye, Marshall Co., Ind
26A3t

Glass ÷ Pails ÷ for ÷ Honey



THEY are made of the best quality of clear, flint glass, with a bail and a metal top and cover When filled with honey, they are very attractive in appearance. They can be used for household purposes by consumers, after the honey is removed—or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey per dozen	$1.60
" 2 pounds " "	2.00
" 3 " " "	2.50

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

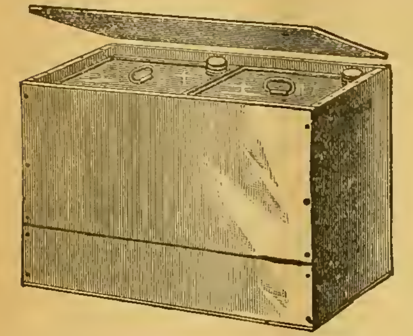
CHEAP FOR CASH—Young Tested Italian Queens. One Queen, $1.25; per half doz., $6; one select tested, $1.50; one untested, 60c; half doz., $3.30. Guarantee safe arrival.
D. E. ALDERMAN, Clinton, Sampson Co., N.C.
28A1t

HONEY ALMANAC!!

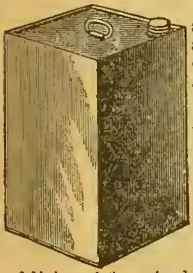
JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can ....(boxed).........	$ .45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans................	.75
12 boxes "	8.40
100 "	65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Choicest Italian QUEENS! **Purely** BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**
15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.
Mention the American Bee Journal.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

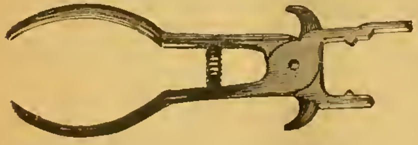
THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook, Montgomery Co., N. Y.
1Atf
Mention the American Bee Journal.

Jones' Frame Pliers.



FOR taking frames out of hives, or moving them in any way desired. It is made of Japanned Iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, **40 cents.**, by mail. By express, 30 cents.

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

Tested Queens Cheap

During the Swarming Season. Prolific Queens, producing all **three-banded** workers. $1.00 each; 6 for $4.00.
27A2t **J. A. GREEN, Dayton, Ills.**
Mention the American Bee Journal.

$1,000 IN GOLD can be had; $1.00 bill sent us will bring you in return, prepaid, a Golden Box containing 30 useful articles, together with $20.00 in **C Money.** A sure thing. Address, ART AGENCY,
6M3t—24A6t Box 950, Circleville, Ohio.
Mention the American Bee Journal.

Ah, There! One Untested Italian Queen, 75c., 3 for $2.00; Tested, $1.50. One Untested Carniolan Queen, $1.00, 3 for $2.50; Tested, $2.00. Bees by the pound and Nucleus. Send for Price-List. Reference—First National Bank. H. G. FRAME, North Manchester, Ind.
22Etf
Mention the American Bee Journal.

BEE-SUPPLIES. Wholesale and Retail.

We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t
Mention the American Bee Journal.

CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

---

The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Samples, 5c., and money returned if they are not extra nice. Untested Queens, $1.00; six for $5.00. Tested (at least 3 bands), $3.00; Selected, tested (4 bands) $4; Breeding Queens (4 to 5 bands), $7.00. Virgin Queens, 50 cents; 5 for $2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**

1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

ITALIAN QUEENS From June 10 to Oct. 1.

Why You Should Purchase of Wood!

HE has had many years' experience. His Queen-Cells are built in full colonies. He uses no Lamp-Nursery. He is located where there are no black bees, and where foul brood never existed. Fully 95 per cent. of his Queens prove purely-mated. He fills orders promptly. His old customers nearly all purchase of him. He warrants every Queen equal to those of any first-class breeder in America in every respect. Price, 75 cents each; one dozen, $8.00. Address,
22Etf **J. F. WOOD,** North Prescott, Mass.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish bee-keepers with Supplies promptly, and at greatly reduced rates. Estimates gladly furnished, and correspondence solicited. Our goods are unexcelled in quality and workmanship. **Italian Queens and Bees** at a very low price. Send for large illustrated Price-List, free. ALLEY'S QUEEN AND DRONE-TRAP AND SWARM-HIVER always on hand.

A. F. STAUFFER & CO.,
40Etf STERLING, Whiteside Co., ILL.

Eighth ÷ Edition ÷ Just ÷ Published

New and Revised Edition
—OF—

BEES AND HONEY,

OR THE

Management of the Apiary
FOR PLEASURE AND PROFIT
—BY—
THOMAS G. NEWMAN,
Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

LIBERAL DISCOUNT to dealers, by the dozen or hundred.

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British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

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CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin........	$ .40....	$1.00....	$ 1.75
" Untested.....	1.00 ...	2.75....	5.00
" Tested......	1.50....	3.75....	7.00
" Select Tested,	2.00....	6.00....	10.00

Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1 75—with the Illustrated Home Journal, for $1.75; or the two Journals and the Book for $2.50.

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Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine Portraits and **Illustrations,** and a great variety of articles, stories and poems for Freemasons and their families; also Eastern Star, Masonic Gleanings and **Editorial Departments** Price per year, $3.00.
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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. July 19, 1890. No. 29.

EDITORIAL BUZZINGS.

The Lesson of the Hour is: Next season order your supplies for the apiary early, and have them on hand, ready for use, long before they are needed.

◆

☞ E. L. Pratt, of Marlboro, Mass., writes: "The AMERICAN BEE JOURNAL turns in more orders than any other bee-paper. We have the largest honey-flow ever seen here."

◆

☞ The annual circular of G. K. Hubbard, of Fort Wayne, Ind., is on our desk. It contains 16 pages, and presents a nice appearance.

◆

☞ E. L. Pratt is writing a book to be entitled, "My New Method of Securing Fancy Comb and Extracted Honey; and Queen Rearing." It will probably be born ere the commencement of another honey season.

◆

Our Illustrated Home Journal is thus highly complimented by E. F. Nason, Editor and Publisher of "The Illustrated Companion," of New York City:

> I must say that the ILLUSTRATED HOME JOURNAL is the best and most readable magazine, at the price, that we have among our exchanges; and when people find out that you publish such a really good magazine, I am sure that your subscription list will increase.

We club the ILLUSTRATED HOME JOURNAL (price $1.00) with the AMERICAN BEE JOURNAL for one year for only $1.60. You cannot afford to do without either– the one as an aid to practical bee-keeping, and the other as an invaluable literary and home periodical for the whole family.

Close Extracting is thus commented upon by a writer in the *Rural Canadian*:

> July is the month when many bees are winter-killed. This may appear strange, but not so. With many the end of July brings the end of the honey season. Bee-keepers will take too much honey from their bees, and in winter they perish; this is careless and unwise.
>
> Leave plenty in the combs; if you can, set aside some combs, and if you find later that you do not require it, there is no difficulty in extracting it; but it is a difficult, expensive, and tedious work to replace it in the combs after removing it.
>
> You might as well work your horse to death, set a hen under more eggs than she can cover, and the like, as to extract too closely, and allow your bees to perish near spring for want of stores. Remember this, and your winter losses will decrease.

◆

☞ R. F. Holtermann, of Romney, Ont., writes us the following item, to correct a mistake that has been made by some. He says:

> I have, in several places, seen it stated that I am Secretary of the Ontario Bee-Keepers' Association. It should have been *ex-Secretary*. I resigned that position, and for a number of years our good friend, Wm. Couse, of Streetsville, has filled the position; and so well has he filled it, that I believe no one has ever thought of a change.—R. F. HOLTERMANN.

◆

☞ "Frank Leslie's Illustrated Newspaper" for the week ending July 12, has a striking double-page picture of the House, Ways and Means Committee which formulated the McKinley Tariff Bill, and it gives, in connection therewith, an article from the pen of Prof. Van Buren Denslow, on the proposed tariff in South America. Prof. Denslow joins issue very decidedly with the scheme proposed by Secretary Blaine, and his article is sure to attract a large measure of public attention.

◆

Our Politest Bow is given to the "Api" for complimentary words on page 105 of the July number. How much pleasanter is this, than to be pursuing one another with unkind and jealous remarks. There is plenty of room for all—and the reading apiarists will patronize those periodicals which are the most worthy of their patronage and esteem. The AMERICAN BEE JOURNAL is now prospering more than ever before, and hopes all other bee-periodicals are similarly situated.

◆

The Proceedings of the Missouri State Bee-Keepers' Convention, held at Marshall, Mo., on April 16 and 17, 1890, are published in a neat pamphlet form, making 8 pages of essays and discussions. We presume that copies of it can be had by addressing the Secretary of the Association—Mr. J. W. Rouse, of Santa Fe, Mo.

◆

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

Another Wiley Dupe has been heard from—and this time from that progressive and exemplary State known as Iowa. Mr. O. S. Compton, of Glenwood, Mich., on July 7, 1890, wrote as follows, regarding a conversation with a resident of Sac City, Ia., about "artificial comb honey:"

> Here is another Wiley dupe—his name is A. Baxter, of Sac City, Iowa. He declared that W. Cheney, of that town, has a large factory devoted to the production of artificial comb honey; that he had witnessed the process with his own eyes; that Cheney shipped all his honey to a commission man in Chicago, and got 15 cents per pound, while genuine bees' honey sold for 18 cents; and that I had never been "around much" if I had never seen artificial honey. I offered him $1,000 for a sample crate, but he said I could get a crate by sending a few dollars to Cheney. I wrote to W. Cheney, Sac City, Iowa, and asked him to name a price on a sample, if he had such, and enclosed find his reply to the same
>
> This little dialogue took place at Goshen, Ind., on May 20, 1890, while waiting to take a train for home. How I did wish for a reward card, such as Mr. Root sends out!
>
> O. S. COMPTON.

In reply to Mr. Compton's letter, Mr. Cheney wrote thus:

> I have just had the pleasure of receiving your letter, and in reply I will say that if A. Baxter told you what you say he did, he told you a lie! There is no factory here to make artificial comb honey, and no such honey is on the market. I am not the manager of any such concern; I have 123 colonies of bees in my home apiary, and have a lot more out on shares, and sell pure honey.
>
> WESLEY CHENEY.

In the above we have another illustration of the manner in which pure fabrications are proven to be such; and it also shows that those who pretend to any knowledge of the art of honey production (unless they be actual bee-keepers) know nothing about that which they presume to inform.

The only rational way to counteract such slanders of our sweet product, is to *educate* the people on the subject. To do that, there is no better method than by generously distributing the "Honey Almanacs" in every neighborhood throughout the country, and even among city people, whom bee-keepers desire to secure as regular customers. Try it, and see for yourself the great value of the Almanacs to those who judiciously use them. Prices on page 494.

◆

Bees in a Church-Spire.—In the new *Epworth Herald* for July 12, 1890, published here in Chicago, we find the following account of a swarm of bees whose aspirations were unusually high, though bees have frequently been known to put on "pious appearances," which is quite appropriate when the sweetness of their labors is considered. Here is the item referred to:

> In New Portland, Maine, a swarm of bees, evidently tired of being disturbed and robbed of their honey, have sought refuge in the top of a church-spire, the hollow space of which they are filling with sweets for their own benefit. Nobody can climb the steeple, and, consequently, those sagacious bees will no longer be plundered.

GLEAMS OF NEWS.

Adulteration of Food and Drugs.

In the Senate of the United States, June 3, 1890, Mr. Paddock, from the Committee on Agriculture and Forestry, reported the following Bill, which was read the first and second times, by unanimous consent :

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of protecting the commerce in food products and drugs between the several States and Territories of this Union and foreign countries, the Secretary of Agriculture shall organize in the Department of Agriculture a division to be known as the food division, and make necessary rules governing the same to carry out the provisions of this Act, and appoint a chief thereof, at a salary of $3,000 per annum, whose duty it shall be to procure from time to time, under rules and regulations to be prescribed by the Secretary of Agriculture, and cause to be analyzed or examined samples of food and drugs sold or offered for sale in any State or Territory other than where manufactured. The Secretary of Agriculture is hereby authorized to employ such chemists, inspectors, clerks, laborers, and other employes as may be necessary to carry out the provisions of this act.

Section 2. That the introduction into any State or Territory from any other State or Territory or foreign country of any article of food or drugs which is adulterated within the meaning of this act is hereby prohibited, and any person who shall wilfully and knowingly ship or deliver for shipment from any State or Territory or foreign country to any other State or Territory, or who shall knowingly receive in any State or Territory from any other State or Territory or foreign country, or who, having so received, shall deliver, for pay or otherwise, or offer to deliver to any other person, any such article so adulterated within the meaning of this act, shall be guilty of a misdemeanor, and for such offense be fined not exceeding $200 for the first offense, and for each subsequent offense not exceeding $300, or be imprisoned not exceeding one year, or both, in the discretion of the court.

Sec. 3. That the chief of said food division shall make, or cause to be made, under rules and regulations to be prescribed by the Secretary of Agriculture, examinations of specimens of food and drugs which may be collected from time to time under rules and regulations to be prescribed by the Secretary of Agriculture under its direction in various parts of the country, and publish in bulletins the result of such analyses. But the names of manufacturers or venders of such foods or drugs analyzed shall in no case be published in such bulletins until after conviction in the courts of violation of this act. If it shall appear from such examination that any of the provisions of this act have been violated, the Secretary of Agriculture shall at once cause a report of the fact to be made to the proper United States District Attorney with a copy of the results of the analysis duly authenticated by the analyst under oath.

Sec. 4. That it shall be the duty of every District Attorney to whom the food division shall report any violation of this act, to cause proceedings to be commenced and prosecuted without delay for the fines and penalities in such case provided, unless, upon inquiry and examination, he shall decide that such proceedings cannot probably be sustained, in which case he shall report the facts to the food division.

Sec. 5. That the term "drug," as used in this act, shall include all medicines for internal or external use. The term "food," as used herein, shall include all articles used for food or drink by man, whether simple, mixed, or compound.

Sec. 6. That for the purpose of this act, an article shall be deemed to be adulterated.

In case of drugs :

1. If, when sold under or by a name recognized in the United States Pharmacopæia, it differs within the knowledge of the seller from the standard of strength, quality, or purity, according to the tests laid down therein.

2. If, when sold under or by name not recognized in the United States Pharmacopæia, but which is found in some other pharmacopæia or other standard work on materia medica, it differs within the knowledge of the seller materially from the standard of strength, quality, or purity, according to the tests laid down in said work.

3. If its strength of purity fall below the professed standard under which it is sold.

In case of food or drink :

1. If any substance or substances has or have been knowingly mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength so that such product, when offered for sale, shall be calculated, and shall tend to deceive the purchaser.

2. If any inferior substance or substances has or have been knowingly substituted wholly or in part for the article, so that the product, when sold, shall be calculated and shall tend to deceive the purchaser.

3. If any valuable constituent of the article has been knowingly wholly or in part abstracted, so that the product, when sold, shall be calculated and shall tend to deceive the purchaser.

4. If it be an imitation of and knowingly sold under the specific name of another article.

5. If it be knowingly mixed, colored, powdered, or stained in any manner whereby damage is concealed, so that such product, when sold, shall be calculated to deceive the purchaser.

6. If it contain within the knowledge of the seller any added poisonous ingredient, or any ingredient which may render such article injurious to the health of the person consuming it.

7. If it consist within the knowledge of the seller of the whole or any part of a diseased, filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or of an animal that has died otherwise than by slaughter : *Provided*, That an article of food or drug which does not contain within the knowledge of the seller any added poisonous ingredient shall not be deemed to be adulterated—

1. In the case of mixtures or compounds which may be now or from time to time hereafter known as articles of food under their own distinctive names, and not included in definition fourth of this section.

2. In the case of articles labeled, branded, or tagged so as to plainly indicate that they are mixtures, compounds, combinations, or blends.

3. When any matter or ingredient has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food or drug, or conceal the inferior quality thereof.

4. Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation.

Sec. 7. That every person manufacturing, offering, or exposing for sale, or delivering to a purchaser any drug or article of food included in the provisions of this act shall furnish such drugs or article of food to any person interested or demanding the same, who shall apply to him for the purpose, and shall tender him its value of a sample sufficient for the analysis of any such article of food which is in his possession. And upon the presentation of such drug or article of food to the proper officer of the food division by a responsible person, with a request from such person for an official analysis of the same, the chief of such division shall make, or cause to be made, such analysis of the drug or article of food so presented, under rules and regulations to be prescribed by the Secretary of Agriculture.

Sec. 8. That whoever refuses to comply, upon demand, with the requirements of Sec. 8 of this act, shall be guilty of misdemeanor, and, upon conviction, shall be fined not exceeding $100 nor less than $10, or imprisoned not exceeding one hundred, nor less than thirty days, or both. And any person found guilty of manufacturing, offering for sale, or selling an adulterated article of food or drug under the provisions of this act, shall be adjudged to pay, in addition to the penalties heretofore provided, for all the necessary costs and expenses incurred in inspecting and analyzing such adulterated articles of which said person may have been found guilty of manufacturing, selling, or offering for sale.

Sec. 9. That in prosecutions for violations of this act proof of the act done shall be held to imply knowledge and intent on the part of the accused, unless such knowledge and intent shall be disproved on the trial.

Sec. 10. That this act shall not be construed to interfere with commerce wholly internally in any State, nor with the exercise of their police powers by the several States.

Concerning this Bill, and the wholesale adulteration everywhere to be found, the *Homestead* gives this very vigorous article on adulteration and adulterators, which will be read with interest at this time :

"If an angel were to swing open the pearly gates and make a tour of the worlds for the purpose of studying, as an observant and conscientious traveler, the moral conditions prevailing outside of the Blest Abodes, and would visit this planet in his tour of the universe, and spend a short time in the marts of trade and commerce, he would, we think, be disposed to scrutinize very closely, on his return, the application of merchants in general for admission to the Haven of Eternal Rest. While his clear perception of the principles of rectitude would doubtless recognize among them many of the very salt of the earth, and many others who, though meaning well and intentionally honest, were the victims of a bad system, he would be compelled to say in general : 'Your appearance is all rule, and your speech fair, but the late will of this establishment is to regard with suspicion any business man who comes from a world whose merchants have the reputation of being adulterators for the sake of filthy lucre, of everything that is used as food, from the milk that nourishes the motherless babe, to the last cordial that moistens the parched lips of the expiring patriarch.'

"We can imagine this supposed visitant examining the sugar, the coffee, the tea, the flour, the butter, the wine, and with some hesitation, and impelled only by a sense of duty, the whisky, to find that the adulterator has done his work in all. He would next investigate the clothing of earth's children to find shoddy everywhere, and the cheap and worthless passing for the valuable. Even the fertilizers which the farmer spreads on his fields would bear the touch of the defilement of the adulterator.

But we think his disgust would reach an unusual height on finding that even the grease of the despised hog had not escaped the pollution of the adulterator—that no creature is so lowly or so filthy but that filthier hands will adulterate its products with something cheaper and nastier, and palm off the deception on a non-suspecting public, provided only and always that by deceiving the public aforesaid, they can increase their own gains.

"If, disgusted and grieved with this revelation of systematic and open adulteration, he should read in the telegraphic dispatches that at the National Capitol a Bill had been introduced not to prohibit this systematic adulteration of food, but to compel the adulterators to brand it with its own proper name and ingredients, he would betake himself to Washington and hover as an unseen presence around the committee of agriculture—he would learn some things that might well make him wonder whether honesty was, after all, anything but an intangible, poetic sentiment instead of a guide to human conduct.

"We can imagine the mental replies which our supposed visitant would make to the sophistries of this gang of adulterators. When it is urged that the product was pure and healthful he would say: 'Why not pass under its own name?' When it is urged that it is actually better than pure lard, he would think: 'Why, then, should this superior article, this vegetable oil distilled in the alembic of nature from the beams of a Southern sun go sneaking around the world bearing the brand of the swine?' When it is urged that this protest against congressional action is a great philanthropic movement to give the black man a chance to prosper by furnishing a market for the refuse of his cotton crop, he would say: 'What a miserable pack of hypocrites is this that dare pollute with their unclean presence the temple of liberty?' And then thinking of the million farmers over the prairies of the West who are yearly robbed by this unclean horde of adulterators, and of the millions of laborers in America and Europe who are deceived and imposed upon by the fraud of adulterated lard, he would scrutinize the committee, visit the House and Senate, and gaze into the inner souls of the members, and ask himself: 'How many of these men will be true to their constituents, to the men who have given them homes, and satisfied them with bread, and will vote for the Conger lard bill? How many of them, when this measure comes up for passage, will vote for delay or postponement, or to recommit, or offer other dilatory motions or amendments, and how many of them will truly and honestly vote for the interests of the men who sent them here? How many of them will skulk and dodge, or do nothing, and then go home and lament that under the circumstances it was impossible to pass a Bill to brand with its true name a commodity that masquerades under a false name on the shelves of every grocer, and the table of every citizen?'

"We are not gifted with angelic vision, and we do not know how many cowards there are in Congress, or how many members have 'grease' *in*, and not *on* their hands. But this we do know, that a member of Congress that has not the sagacity to see through the sophistry of his gang of lobbyists against the Conger pure lard Bill, or has not the manliness to stand by and pass it, should never, while his head is hot, have the opportunity to betray the people's trust again. Let the weakness of the 'Simple Simon' be laid bare, and the mask stripped off the hypocrite. It is no time now to send innocent babes to do men's work, nor allow time-serving hypocrites to connive at the robbery perpetrated on an industrious and long suffering people. When Western congressmen come home to be judged by their constituents at the November election, let there be no smell of cotton-seed oil on their hands. The negro must not put his foot in the food on the white man's table. Adulteration must bear his own shame."

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

California Honey Crop.—From the *Pacific Rural Press* we copy the following about the honey crop of San Diego county, California:

> The first carload of the season's honey crop, says the San Diego *Union*, pulled out June 8 for Boston, taking the superior extracted honey for which San Diego county is famous. As this is one of the even-numbered years, a large yield is anticipated, and although brush fires have interfered somewhat, it is expected that the yield will be nearly 500,000 pounds greater than in 1889.
>
> A honey dealer who has carefully watched the industry, in which he was actively engaged for 20 years previous, asserts that the county's crop last year was about 1,000,000 pounds, although a honey buying firm at San Francisco has stated it to be but 200,000 pounds. In contradiction of this, he names one producer alone who supplied the market with 300,000 pounds, and with what he knows of the other apiaries, is satisfied that 1,000,000 pounds is not an over-estimate.
>
> The light rainfalls in 1877, 1879, and 1885 caused a total failure of the honey crop. The best years were 1874, 1876, 1878, 1880 and 1884, when some 3,000,000 pounds were produced—the county's largest crop. Then 1886 and 1888 were good years, and 1890 is expected to make a record. The bee-ranches of the county extend pretty well over the back country, including the San Jacinto region, Elsinore, Temecula, Fallbrook, Encinitas, Del Mar, Pala, Poway, Bear Valley, Escondido, Bernardo, Santa Ysabel, Ballena, Nuevo, Fostar's Lakeside, San Vicente, Campo, Jamul, Jamacha, Sweetwater, etc.
>
> The wholesale price now ranges from 7 to 12 cents a pound for comb honey, and from 4 to 6 cents for extracted, which is a little under the prices of 1889.

Help in the Apiary.—Mr. C. H. Dibbern, of Milan, Ills., gives the following in the *Western Plowman*, as his experience in hiring help for the apiary:

> I have often heard bee-men say that they would like to keep more bees, or to start out-apiaries if they could but get reliable help. They seem to take for granted that such help cannot be secured. How do they know this? Have they ever tried to secure such help, by a little advertising, as we have? When we decided to start our Mill Creek apiary, we needed more help, and put a little notice in the "want" column of one of our leading bee-papers, and that brought us over one hundred enquiries. These we "sifted" until we had about a dozen of the apparently most desirable applicants, and to these we put further questions as to ability, sobriety, skill, etc., and again sifted out one-half. When we got down to six, there seemed to be little choice, and we selected the two that appeared to be the most desirable. In due time the boys came, and we soon found that we had made a mistake as to one of them. For a few days he worked well enough, but we found he was a high flyer. He could talk of nothing but base-ball, croquet, camping out, and enjoying himself generally. Well, just four days of work finished him, when he concluded to return to his father's house, where we presume the fatted calf was killed in honor of the event in due time. Well, we at once wrote to one of the others, and now have two as good helpers as one could wish. I have no doubt had I wanted a dozen helpers I could have had them all out of those who applied to me, and got all good and deserving young men

QUERIES and REPLIES.

Melting or Saving Combs—Moth-Worms and Wax.

Written for the American Bee Journal

Query 717.—1. What is best to do with combs in Langstroth frames that are not wired—melt them into wax, or save for use? 2. Will moth-worms injure wax?—Ia.

1. Save them for use. 2. Yes.—J. P. H. Brown.

1. We do not understand the question. 2. Not if melted.—Dadant & Son.

1. Save them. 2. Not after it is rendered.—Eugene Secor.

1. Save them, of course. 2. Not in the cake form.—G. M. Doolittle.

1. Save them for use, if good. 2. No.—Mrs. L. Harrison.

1. If good, save them for use. 2. In combs, yes; in bulk, no.—M. Mahin.

1. If nice, straight combs, keep them for use, by all means. 2. *No.*—A. J. Cook.

1. Save the combs, if not too old and in fair condition. 2. No, if entirely free from pollen.—C. H. Dibbern.

1. If they are good, do not melt them. 2. They do not injure wax in the cake materially.—R. L. Taylor.

1. I would use them, if the frames were well filled, and in good condition otherwise. 2. No.—J. M. Hambaugh.

1. Why, use them of course, if you have any use for them. 2. Very seldom, but they will occasionally: I have had them do it.—A. B. Mason.

1. If in good condition, save and use. They are as good as money in the bank. 2. If the wax contains much pollen the worms will work in it; yet the damage will be small.—H. D. Cutting.

1. Transfer them into the "Nonpariel" brood-frames, or some other brood-frame that does not require to be wired. 2. Moths sometimes injure foundation.—G. L. Tinker.

1. If the combs are all right and straight in the frames, and mostly all worker-cells use them in the brood-chamber. If not, melt them up into wax, and have them made into foundation. 2. Yes.—J. E. Pond.

1. Save them, if they are good worker-comb. 2. I suppose you mean wax that has been melted into cakes. I never knew such to be hurt by moth-worms. As a very rare thing, I have known foundation to be so hurt.—C. C. Miller.

1. I use them, of course, for all purposes for which good combs are used in the apiary. I have over 1,000 of them that have no wire in them, and have several hundred that are wired. I prefer combs without wire. After a few *sets* of brood have been reared in them, they are strong enough for any use. 2. The moth-worms never injure my wax after it has been "rendered" and made comparatively pure.—G. W. Demaree.

1. Good combs in Langstroth frames are all right without any wires. The use of wires is mainly to hold the foundation straight while comb is being built. 2. No, practically they will not. Moth-worms cannot live on clear wax. They must have some pollen.—James Heddon.

1. If the owner thinks he will have no further use for them, let him melt the combs and make kindlings of the frames. Gather up the fragments, and let nothing be lost. If the combs are good, and are needed for some future use, hang them about half an inch apart in boxes, and encourage spiders to live among them. Combs may be kept indefinitely with spiders as protectors against moths. 2. Moth-worms do little or no damage to wax.—J. M. Shuck.

The questions are both indefinite, and very unsatisfactory. 1. The first question does not state whether the combs are good, straight worker-combs or not. If they are, by all means save them for future use. If not, melt them into wax. But care must be taken to protect them from the ravages of the moth-worms, by fumigating them with sulphur. 2. Does the questioner refer to wax that has been rendered, comb foundation, or common brood-combs? Wax that has been rendered or made into comb foundation contains no pollen, and moth-worms cannot subsist on such. If by "wax" the questioner means brood-combs—of course moth-worms will injure them, for they contain pollen, etc., to invite the moths, unless they are fumigated with sulphur and otherwise protected.—The Editor.

Feeding Swarms in a Honey-Flow to Forward Storing.

Written for the American Bee Journal

Query 718.—Does it pay when full sheets of comb foundation are to be used, to feed from 3 to 5 pounds at night for a few nights, to new swarms being hived during the honey-flow, to assist in forwarding them to surplus storing of honey?—F.H.W.

No.—M. Mahin.

No.—James Heddon.

No.—A. B. Mason.

No.—Dadant & Son.

I doubt it.—C. C. Miller.

Not with me.—G. M. Doolittle.

No, certainly not.—R. L. Taylor.

I do not think that it pays.—J. M. Shuck.

No, never feed during a honey-flow.—Mrs. L. Harrison.

I think not, but I have never tried it.—C. H. Dibbern.

No. Never feed when bees are gathering.—A. J. Cook.

No. I would codsider it time and material wasted.—H. D. Cutting.

I am not sure, but I think that it would not pay. Try and report.—J. M. Hambaugh.

It is useless to feed when the honey-flow is abundant. It will pay to feed if the flow is very scant.—J. P. H. Brown.

I think not, though I have never tried it. Besides, I do not think that full sheets of foundation should be used in hiving swarms. It is the associate evil of wiring brood-frames—neither pays.—G. L. Tinker.

It does not, if the bees are gathering nectar from the fields. It is far better to put a frame of comb filled with honey in the outer side of the hive, with cappings broken.—J. E. Pond.

I should not do it. I believe in making bees self-supporting. I doubt if it pays to stimulate in that way—in fact, I see no need of it "during the honey-flow."—Eugene Secor.

No, there is usually plenty of honey coming in to stimulate comb-building at swarming time in my locality (Kentucky). If, however, a few days of rainy weather succeed the casting of swarms, it will pay to feed, if you can get the bees to take feed at such a time. My bees will not touch honey when exposed right under their noses during a good honey-flow.—G. W. Demaree.

When honey can be obtained from the flowers it is useless to try to "feed" the bees in any other way. They prefer the fresh nectar from the flora, and will gather and store it in the combs, and entirely ignore all the proffered "food" you place before them.—The Editor.

The Premiums offered in the Honey and Apiary Department at the Detroit Exposition, are as follows:

Exhibitors will not be allowed to remove honey from their exhibit during the Fair, but may sell from a reserved supply, for which no charge will be made.

Exhibitors who sell honey, must enclose it securely in paper or cartons.

Honey exhibited or sold must be this season's crop, and all honey must be the produce of the exhibitor.

Exhibits competing for a single premium cannot be included in a display.

Colonies of bees must be exhibited so as to be readily seen on at least two sides.

A breach of these rules will forfeit all premiums that may be awarded, and the right to exhibit the following year.

In judging bees, purity of race shall constitute the competing points.

CLASS 58.

790—Most attractive display of comb honey—$35.00 ; $20.00 ; $10.00.
791—Specimen of comb honey, not less than 20 pounds, quality and manner of putting up for market to be considered—$10.00 ; $5.00.
792—Most attractive display of extracted honey—$35.00 ; $20.00 ; $10.00.
793—Specimen of extracted honey, not less than 20 pounds, quality and manner of putting up for market to be considered—$10.00 ; $5.00.
794—Display of comb honey by a lady—$20.00 ; $10.00.
795—Display of extracted honey by a lady—$20.00 ; $10.00.
796—Most attractive display of beeswax—$20.00 ; $10.00.
797—Specimen of beeswax, not less than 10 pounds, soft, bright yellow wax to be given the preference—$6.00 ; $3 00.
798—Single comb nucleus Italian bees—$10.00 ; $5.00.
799—Single comb nucleus black bees—$10.00 ; $5.00.
800—Single comb nucleus Syrian bees—$10.00 ; $5.00.
801—Single comb nucleus Carniolan bees—$10.00 ; $5.00.

SWEEPSTAKES ON BEES.

802—Display in single-comb nuclei, of the greatest variety of the different races of bees—$10.00 ; $5.00.
803—Assortment of honey-candies, quality to govern—$6.00 ; $4.00.
804—Assortment of fruits preserved in honey, quality to govern—$6.00 ; $4.00.
805—Display of pastry made with honey—$6.00 ; $4.00.
806—Honey vinegar, not less than one gallon, shown in glass—$6.00 ; $3.00.
807—Specimen of comb foundation for use in the brood-chamber—$6.00 ; $3.00.
808—Specimen of comb foundation for use in section-boxes—$6.00 ; $3.00.
809—Comb foundation, for use in the brood-chamber, made on the grounds—$20.00 ; $10.00.
810—Comb foundation, for use in section-boxes, made on the grounds—$20.00 ; $10.00.

SWEEPSTAKES.

811—The largest, best, most interesting, attractive and instructive exhibition in this department, all things considered—$35.00 ; $20.00 ; $10.00.

Competent judges will carefully examine and pass upon any new and meritorious improvement or invention, and make such honorary rewards as they may deem just.

CORRESPONDENCE.

BROOD-COMBS.

Objections to the Wide Spacing of Brood-Combs.

Written for the American Bee Journal

BY Z. T. HAWK.

I have watched with great interest for the replies to Dr. Miller's articles on pages 214 and 365, relative to the proper spacing of brood-frames. If the Doctor holds himself in readiness to be convinced by the reports of the box-hive men, I have no doubt he will adopt the 1½-inch spacing. The bees evidently plan for a large amount of store-room above the brood, and as a consequence the combs in box-hives and hollow trees will usually be found to average 1½ inches from center to center. Thick combs above, necessitate wide spaces between brood-combs below, and I have no doubt that in a state of nature this is the best possible arrangement for safe wintering. But when bees are wintered in the cellar or in chaff hives, I am of the opinion that this matter of close or wide spacing cuts a very insignificant figure.

I am fully satisfied that wide spacing is "nature's way," and I am just as fully satisfied that I cannot obtain the best results in comb-honey production by following it.

Three years ago, when I adopted the Van Deusen metal corner for brood-frames, I adopted the 1½-inch spacing with it, for the irons were not then made any other width; but the stern logic of facts has compelled me to go to the expense and vexation of changing to a closer spacing. Now let us see why:

Since brood-comb is only about ⅞ of an inch thick, the 1½-inch spacing permits a considerable thickening of the upper part of the comb for storage purposes. If the whole upper part of every comb was equally thickened, no great harm would be done, but such is not the case. All conceivable varieties of thickness and thinness occur, the undulations of surface on each comb conforming to those adjacent combs, rendering it, in many cases, impossible to change the relative position of combs in the hive. Such combs will not fit anywhere, only where they were built, unless they are shaved off, and who wants to handle frames under such conditions?

The next difficulty with the wide spacing is a little more serious, for it affects the brood-rearing capacity of the comb. Every bee-keeper knows that worker-brood is seldom if ever reared in cells more than seven-sixteenths of an inch deep, and it is evident that the greater the area of thickened comb, the smaller the brood area will be. Colonies that have a tendency to store honey in the brood-chamber will thicken an undue proportion of their combs, thus restricting the queen to the lower part of the central combs. It is useless to argue that the bees will cut these cells down when needed again for brood—they will not do it, as I have learned from sad experience. There are many combs in my hives that by improper reversing were made thick at both top and bottom. In the center of these combs is an oval area of brood-comb that comprises probably one-third of the entire area of the comb. This is the second season they have been in that condition, and I cannot determine that the bees have cut down a single cell for the purpose of brood-rearing.

A third objection to the wide spacing is, that so long as the bees are amply provided with storage comb in the brood-chamber, they are slow to enter the sections. The reasons are obvious. The limited brood area has reduced their numbers, and an ample supply of honey in the brood-chamber has removed all anxiety to provide further for the future.

At my earnest solicitation, the width of the Van Deusen metal corner was reduced to one and eleven thirty-second inches, and hereafter all my brood-combs will be spaced that distance from center to center. Whether that is just the right distance or not, I do not pretend to say, but I know from previous experience that it suits me much better than the wide spacing.

Denison, Iowa.

BURR-COMBS.

Thick Top-Bars, Honey-Boards, Brace-Combs, etc.

Read at the Ohio State Convention

BY ERNEST R. ROOT.

Some years ago, at a convention of the North American Bee-Keepers' Society held in Detroit, Mich., Mr. J. B. Hall, of Woodstock, Ont., exhibited some frames having top-bars plump one inch square. Although these frames had been in use several years in strong colonies, the remarkable fact was, that they never had had any burr-combs built over them. But little seems to have been thought of the matter at the time, though it is pretty evident that a good many went home and experimented.

In an essay read at the last meeting of the Northwestern Bee-Keepers' Society, held in Chicago, Dr. Miller made the statement that the ordinary slatted honey-board, which was supposed to be proof against burr-combs in the upper bee-space, had, during the past season, failed to entirely prevent the same. He further stated that it was considerable labor to remove the honey-board, to say nothing of the trouble of removing the brace-combs on the bottom of the honey-board, and removing the same from the top of the brood-frames. The Doctor then alluded to the fact of J. B. Hall's thick top-bars preventing brace-combs, and then asked the question if that might not be the most feasible method of obviating brace-combs altogether, if not dispensing with the honey-board.

At the time, little was thought of the matter; at any rate it seemed to be absolutely preposterous that the honey-board so generally in use among bee-keepers might be dispensed with. A similar article was sent to *Gleanings*, and at the time we called for facts. You will remember that a score or more of testimonies have been printed, all or nearly all, testifying to the fact that the thick top-bars—that is, bars an inch wide or a trifle over, ⅞-inch thick, or a trifle less, not much, and spaced five-sixteenths of an inch apart, invariably prevent brace-combs.

These facts are substantiated by a large number of other testimonies, which, for lack of space, we were unable to publish. To prevent brace-combs without a honey-board, three requisites are important: Extra width, extra thickness, and a reduction of space between the bars. Top-bars ⅞-inch square, but spaced ½ inch apart, will not prevent brace-combs, although they will largely discourage them. The same may be said of top-bars 1⅛ inches wide, but only ¼ inch thick. It has been shown pretty conclusively, that the bars should be regulated in width, so that a certain number of frames in a hive will space five-sixteenths or ⅜ of an inch apart.

Now, then, if thick top-bars will accomplish the results claimed, it would seem that every bee-keeper, after testing them for himself, on a small scale, might well feel that he could afford to make the change. Let us consider some of the important advantages that would result from their use:

We will suppose that Brown is a bee-keeper running for extracted honey. He does not use honey-boards. When he goes to one of his hives, preparatory to extracting the upper story, he proceeds to lift out the frames. About every other one will lift the brood-frame below it, on account of the burr-comb attachments. The frame sticks, but Brown resolutely pulls until it drops down with a jar on the lower rabbets. The bees are cross, and sting, but there is no help for it. If he had thick top-bars it would obviate this trouble. Yes, he could obviate it with a honey-board; but the honey-board at the close of the season will be stuck down to the brood-frames; and when he goes to remove it in the fall, those same brood-frames, if they hang on tin rabbets, will come up with the honey-board, and down they will go with a bang.

Every spring, Jones, who uses the narrow and thin top-bars, is obliged to clip off the brace-combs. Bees build them up so high that he cannot adjust the cover unless he does, without killing the bees. Aside from that, he considers it a waste of time for bees to deposit wax above, and a waste of time on his own part in removing them. He thinks that if top-bars will obviate his trouble, he will use them at once.

Two objections have been urged against heavy bars. The first is, that they will cost more. This is a mistake. They can be sold without comb-guides at the same price as the old frames. The second objection is made, that they remove the brood-nest too far away from the surplus apartment. This, likewise, has been stated to be a mistake. Two prominent bee-keepers declare that they have used thin and thick top-bars, and that the bees entered the supers just as readily over the heavy bars as they did over the thin ones.

Perhaps there has been another objection urged: One bee-keeper says, that honey-boards, with him, have prevented burr-combs, and that he does not care for anything better. Ah, the honey-boards do not do it. The lower bee-space is always filled, while the upper one is left intact. With heavy top-bars we have only *one* bee-space and *no* burr-combs.

Now, then, you have the whole facts before you, so far as I know them. As I have urged in *Gleanings*, I would urge now: Do not break your honey-boards into kindling wood yet. Neither would I consider it wise to try more than a few heavy bars this season. Your own experience will determine for you best whether you can with profit rip off, as it were, the old ⅞-inch top-bars, ⅜-inch thick, and substitute in their places a heavier one.

I may say, however, that the testimony is from such reliable bee-keepers that I can scarcely see how the heavy bars can fail to produce the results claimed for them. Please understand that I have had no experience with them myself, and I have attempted to give you only a condensed summary of several scores of letters that have passed under my eyes.

Medina, Ohio.

EATING HONEY.

Getting Everybody to Use Honey —Bee-Keepers' Union.

Written for the American Bee Journal

BY J. W. TEFFT.

Children are not actually crying for honey, but there are hundreds of thousands of uncultivated palates in this country that only need the opportunity to try it, to like it. No one knows what he likes until he tries it; and how can the average citizen know whether or not he likes honey, when it is a fact that he never had a real good mouthful of honey?

Now, why cannot the honey-producers of this country make a joint and honest endeavor not only to put a fine article on the *home* market, but in some manner *see* that it reaches the consumer at something less than twice its cost of production?

UPWARD AND DOWNWARD VENTILATION

On page 10, of the AMERICAN BEE JOURNAL for 1889, is an article by one of our bee-masters, who closes it by saying that upward ventilation is very desirable. So I always thought until about six years ago, when I tested downward ventilation, and found that the condensed moisture would pass away into the packing under the bottom edge of the division-boards, and no ice would form on the combs.

I was of the same opinion also that the ice melts and dilutes the honey, which causes bee-diarrhea. This also I discovered to be one reason, until I tested the idea of placing a coarse piece of burlap above the bees, and above that several thicknesses of newspaper, and over that 6 to 12 inches of forest leaves. Since that time there is no moisture at all on the combs, as the paper absorbs the moisture as fast as formed. This is both upward and downward moisture-absorbing ventilation.

My opinion is, that bee-diarrhea is not caused by the bees eating diluted or thin honey, but by eating honey that has become contaminated by fetid air and no downward ventilation—the same as a human being would have the disease, if he lived and ate in a room near the upper ceiling, and not ventilated at the base, which causes the air to become fetid.

HE WANTED THE UNION'S HELP.

It is usually a pleasure to me to render one a service, even in cases where I am personally disinterested. But when such a person as the one who called at my house the other day comes along, it makes me feel like tacking a sign on the door, saying, "Ask no favors."

The fellow has a large apiary and a farm worth about $20,000, admirably located for a manufacturing site. He wanted me to intercede for him to have the Bee-Keepers' Union help to secure aid in a troublesome lawsuit about his bees bothering his neighbor. He had kept posted as to the work of the Bee-keepers' Union, and was greatly pleased with the methods of promoting the interests which the Union had adopted. He knew that the Union could do him a great deal of good, and was anxious to secure the aid from the Bee-Keepers' Union.

I told him that it would be a pleasure to present his grievances to the Union, and asked him if he was one of its members. He replied in the negative, when I suggested that in view of the fact that the expenses of the Union were somewhat heavy, it would be a very proper thing for him to join, and thus aid in the carrying on of their work, at least to the extent of $1.00 per year. You wouldn't believe it, but this fellow who was soliciting a $500 favor at the hands of the Union, positively refused to contribute one cent toward the good work!

I have no fault to find with those who take no stock in the Union, and then ask no favors, but when such a shrunken-souled fellow like that described comes along, it makes me feel misanthropic for hours afterwards.

Collamer, N. Y.

CARNIOLANS.

My Experience with these Bees —The Honey Crop.

Written for the American Bee Journal

BY S. A. SHUCK.

In May, 1889, I purchased a select tested Carniolan queen, intending, if these bees proved to be as represented, to Carniolanize my entire apiary. From this queen I bred 35 queens during June, July, and August, 1889. The old queen swarmed twice, and was superseded late in the fall.

Every one of the young queens mated with Italian stock—at least their progeny, show more or less yellow bands. The only points of superiority that I could see in pure Carniolans over the common black bees, was their gentleness, and the disposition to stick to their combs while being handled. They were equal to the worst hybrid I ever saw in mutilating the cappings of their honey.

The progeny of the young queens are the most persistent thieves I ever owned. During the past winter and spring I lost about 30 colonies, and commenced the season of 1890 with

125 colonies. Twenty-five of these had Carniolan queens, and 100 with Italian queens, about 20 per cent. of which were mismated, mostly with Carniolan stock.

Up to date, I have for the entire apiary, 60 per cent. of swarms, while for the 25 Carniolans I have nearly 90 per cent. of swarms, which makes less than 50 per cent. for the Italians.

I have extracted once from several colonies run for extracted honey, and the greatest amount taken from pure Italians is 43 pounds; the greatest amount taken from mismated Italian stock, is 42 pounds; and the most taken from Carniolans, is 30 pounds. The least taken from pure Italians is 21 pounds, and the least from Carniolans, is 15 pounds.

To illustrate further: My little boy, 12 years old, has 10 colonies, part are worked for extracted, and part for comb honey. On July 1, I extracted from 4 colonies—all that were ready—3 Italians and 1 Carniolan; the Carniolan had swarmed a few days previous, and neither of the Italians have swarmed yet. I took 106 pounds from the 4 hives, and only 15 pounds of this came from the Carniolan; while one of the Italian colonies gave 43 pounds.

The only case of sections ready to be taken off is on a hive containing pure Italians. The first swarm for the season was Carniolans, the last to date was Carniolans, and that, too, from the same queen that cast the first swarm. She was hived on one comb and nine empty frames, and one case of sections, on June 8. The case of sections is about half full.

I think now that I shall be over 1,000 pounds of honey short for the season, by having Carniolans instead of Italians. Perhaps "a hint, etc.," is sufficient.

Liverpool, Ills., July 2, 1890.

◆

CALIFORNIA.

Do Bees Make Honey?—The Raisin Industry, etc.

Written for the American Bee Journal

BY D. B. WIER.

For once our editor is wrong. He has not referred to Webster; when he does do this he will see that there is no sophistry used by any one who has written on this subject, who holds that bees do make honey. As well might he hold that a man cannot make lemonade, the miller flour, the farmer cider, etc.

To *make*, means to contrive, to form, to mold, press, drive, mix, to change in form, etc. For instance, if we *make* a sugar syrup, and then mix with it one thousandth of its bulk of formic acid, it is no longer sugar syrup, for we have *made* or changed it by the addition. It may not be honey technically speaking, but it is no longer simply sugar syrup. Now, if we add to the mixture a certain amount of citric acid, and let it stand sometime, we may have not *made* honey, but we have *made* nearly exactly its equivalent.

Besides, we have the most ancient and respectable authority on chemical and scientific matters in the world dead against him. I refer to Mother Goose's melodies, page——, where we find—

"God made man,
And man made money;
God made bees,
And bees made honey."

This should settle the question permanently. For M. G. does not say that bees are *the only* parties who can make honey, so leaving the inference to be drawn that any one else may make honey who can bring the proper ingredients together and then mix or combine them. If Brother Newman (for I to am an editor on "the best country weekly in California," hence *brother*) will feed a new, clean swarm of bees, in confinement, on pure sugar syrup *made* (see how these *makes* and *mades* come in) from the best Dutch cut loaf, and after it has remained in their possession one month in their combs, if he can change it back into crystallizable sugar again, we will all give it up that bees do not *make* honey.

Yet this stored honey may not taste like that which the bees gather from linden, sweet clover, white clover, sage brush, tar weed, or bug-juice, but after the bees have manipulated it, it is no longer sugar, or sugar syrup; it is to all intents and purposes honey—not white clover, basswood, tar weed, bug-juice, etc., honey, but simply pure honey, *i. e.*, sugar honey, instead of tar weed, etc., honey.

If we were going to run this thing into the niceties and technicalities, our editor would find himself landed into a very close, small corner, for a committee of experts would first have to decide what is honey. The natural sweets gathered by bees are so varied in all their characteristics, that when the problem was solved, what is honey, every other compound of sweets gathered by bees from other sources that was not essentially like what was declared to be honey, would have to be ruled out? Honey gathered by the bees from hoarhound and incense cedar is offensive to the taste of some, yet it is certainly honey. Honey gathered from the juice of some grapes would be very poor, but that from our royal Muscats—when fully ripe, are well-nigh as sweet and pure flavored as any honey—might be very good!

My former article on this subject has brought me scores of inquiries again from all over the country. Since I have been in California I have tried carefully to write nothing but the exact truth on all subjects. In my first letter I recommended *parts* of this county highly for apiaries. I meant every word I wrote in that article. I did not recommend this little city of Petaluma for that purpose. Why? Simply because in summer there is too much wind, and often cool wind. This is exceedingly grateful to us usually, but a little rough on a bee with a full cargo on board, and as these summer winds are constantly from the same direction, and strong enough to prevent a loaded bee reaching home, I should not call it a good place for apiaries. Yet in the same block in which I reside, are five hives, from which the owner has taken ten pounds a week, for a long time this spring, of splendid honey, yet there are thousands of locations in the county without any drawbacks whatever. As with fruits, so with bees. If we are going to make a business of either, we should in the start select the best location, all things considered.

North of here in Mendocino county one might find as choice locations as there are in the world for bees and honey, and within six miles of the railroad; yet it might cost him $5,000 to get a wagon road out—too much mountain.

Lake county, one of the most delightful and finest counties of the State, "The Switzerland of America," is very nearly a paradise for soil, products, health and comfort. Yet with no railroad, and 25 to 40 miles of *mountain* road to get into or out of it, it is a poor place to grow corn in for 20 cents a bushel, or honey at 5 cents a pound, and then haul it out.

I said the *foot-hills* of Kern county are good for bees, and meant it. Yet on the floor of the valley right around Bakersfield, apiaries might do royally well. I did not say so, for I was sure the foot-hills were the better. Yet at Bakersfield, with its thousands of acres of alfalfa in bloom the year around, and the whole ground carpeted in winter and spring with the sweet alfillarce—also a grand grazing plant constantly in bloom, and the bloom of the millions of fruit trees and vines, apiaries might find a poorer place. But there is a constant summer wind up the valley, even stronger than here, and it is a hot wind instead of cool, that might worry the bees somewhat.

As for land prices in this State, the question is like answering the one, "How big is a piece of chalk?" all depends on what can be grown on it, the value of the crop, fertility, and ease of working the soil; nearness to market, health, comfort, and many other points, and especially the improvements, which are houses, barns, fences, fruit-trees, and vines in bearing. In many places these prices seem truly fictitious—they are in part; as an example, in one part of this county land alone, without any improvements—land that it will cost $40 to $50 an acre to clear up for any crop, is held, and being sold at from $150 to $250 an acre; while right here near Petaluma, in just as good and healthy climate, just as good land that will produce crops which will sell for as much per acre—land ready for plow, trees and vines, fenced, with houses and barns on it, 16 miles nearer market, with both railroad and water routes, can be bought for $60 to $120 per acre, within two to ten miles from town, and further back at from $10 to $50.

Why this great difference? I think it would take a Philadelphia lawyer to find out. It is simply "wind boom." There is no legitimate reason for any such foolishness, and the same is true of points all over the State.

Thus, again, Kern valley is in every point and particular a better raisin county than Fresno and vicinity; yet land can be had in Kern for one-fourth to one-eighth of what it can be bought for the same distance from Fresno.

The great syndicate I mentioned in my last, are offering the choicest lands in the great Kern valley, undoubtedly the best raisin *climate* in the world, and equally good for nearly every other known fruit, in 20-acre tracts on long time, or larger tracts to *actual* settlers, who will improve, at $45 an acre—less than adjoining land can be bought for cash.

Twenty acres, strange as it may seem, is all the land a large family wants, needs, or has any need of for legitimate fruit-growing. More would simply be a burden. Then the cost of the raisin or other fruit farm in Kern, is $900 on any reasonable terms; the syndicate even going so far as to promise and contract, that if the colonist will do his part, he will be allowed to pay for his home from his first crops, and not allowed to starve in the meantime. That is all there is of it.

California, each and every portion of it that one could with reason call habitable, is about the best place on this earth to live in, have comfort in, and to make money in. Yet I must say that no one has any business to come here without he has money—money enough at least to make a start with towards buying a home. It is no country to come to, to work out for hire, especially in the country, for many reasons. The country home *is safe*—always brings nice returns, if rightly managed, and is independent.

Petaluma, Calif.

[The word "make" has many definitions—one of which is "to prepare," and it is so used when we speak of "making a bed." In the article criticised, we referred to its primary definition, which is "to bring into being; to create or cause to exist"—as the Eloheim said at the Creation, "Let us *make* man." In that sense, bees do *not* make honey. Bro. Wier is in a playful mood, as will be seen by his mirthful reference to "Mother Goose's melodies."

Certainly he may *make* free with the word while trying to *make* out a case; but he must *make* sure to *make* it known that when he *makes* an example, he must *make* good sense in order to *make* a creditable defense! Or we may *make* merry over his failure to *make* an argument which would *make* any one believe that he was not *making* fun of the whole matter!

The word is so variously used that it *makes* no difference what shade of meaning is desired, he can *make* it to suit himself!

To *make* amends, let us "*make* the punishment fit the crime," and thus *make* an end to the whole controversy. —Ed.]

HONEY.

Some of the Abuses of Extracted Honey, and the Remedy.

Written for the American Bee Journal
BY W. J. CULLINAN.

It was with more than usual interest that I read the excellent article on page 445, by C. W. Dayton, on the above subject. I read the article once, then read it again, and, John Allen-like, think I shall "turn back and re-read certain parts on which I am not perfectly clear."

Extracted honey is my hobby; I prefer to produce it, prefer to eat it, prefer to see it—and if it had not been so much maligned by those outside, and so ignominiously treated by those inside of bee-keeping circles, I would prefer to sell it. But after thousands of tons of an unripe and inferior article have, through the ignorance or carelessness of would-be honey-producers, found its way into the hands of consumers, satiating the palates of many, is it any wonder that people say, as Mr. Dayton remarks, that honey "does not taste so delicious as it used to?" or that the vender of extracted honey, even though he have a good article, meets with so many obstacles, and finds it so difficult at times, to effect sales?

I think that Mr. D., while he cannot claim priority in this, has helped to solve the problem for those who say that they cannot sell extracted honey. Let them try Mr. D's plan of leaving it in the hives until it becomes ripe, rich, and delicious, then store in clean receptacles, bung or seal up tight, and try the sample plan of selling, and see if their sales do not surprise them.

I fully agree with Mr. D., where he says that the "custom of selling all extracted honey in small packages is belittling to the business, and casts the idea that a little of it is all that is of any use," etc., but, I would ask, what is to be done when the average grocery-keepers throughout the country—and, I am grieved to say, in cities like Quincy (31,000), and Kansas City (200,000)—will look at you as though you were trying to hang a dead weight about their necks, when you ask them to buy a barrel of honey at one time?

The plan of selling in 40 and 60 pound cans is a good one, but judging from my own experience, it takes a hero in the trade to convince the average person that he needs that much in his business. However, it is well to give such questions a sort of renovating shake occasionally, and Mr. D's article may set some of the producers of extracted honey to thinking, and tend toward the production of an article between which and the adulterated article, it will not be so hard, as I have seen it, to discriminate.

Quincy, Ills.

STANDARD.

Standard Hives, Sections, Honey-Boards, Frames, etc.

Written for the Colorado Farmer
BY D. R. EMERY.

The question is often asked, "Have we a standard hive?" or "Is it not desirable to have a fixed hive, leaving the way open for improvements?" It seems that the experience and experiments of the last decade, would warrant an average standard for general use, and let specialists suit their own fancies.

Some claim that a small eight-frame hive of 1,728 to 2,000 cubic inches, is large enough; that hives of this size will economize heat better, and compel more surplus storage, and cost less lumber. Others have used hives of 3,500 to 4,000 cubic inches, that were filled with bees and honey, and did as well or better than the smaller hives. This much is believed: "The more worker-bees, the more honey can be gathered." A large family will need house-room in proportion. But a very large hive is so unwieldy to handle. As some bees are averse to carrying honey above, a broad hive with frames may do for extracted honey. As that is not the commercial style or demand, other arrangements and "fixin's" are necessary.

It appears now, that the Langstroth-Simplicity hive and frames, with the one-piece, one-pound sections, is meeting the general idea of a "standard." All the other improvements can be attached.

The next important question to be settled, is the kind and arrangement of the honey-board. Also an easy plan or device for forcing or coaxing bees to "escape" from the surplus honey, and a simple, automatic swarm-hiver. I believe there is more resting on the honey-board or second-floor device in securing surplus honey, with a minimum of labor and trouble in handling honey and bees, than anything else. It seems to me that a board floor in two pieces (divided lengthwise of the hive) is easily removed, with a bee-entrance at the front end only (opened or closed by a tin slide or other convenient appliance), is going far toward meeting a growing demand. It is not necessary to have so many openings for the bees to go above.

A slat honey-board, or one with openings at the back end, causes the bees to run over the comb and brood below. The nurse-bees are disturbed by the rushing, eager workers, and the workers are retarded by the nurses and young bees. During a good honey-flow in warm weather, the bee-escape to the outside may be left open, facilitating egress and ventilation. In a ten-frame hive you can take out for extracting one or more frames on each side of the brood-nest, or exchange with old blackened brood-comb, and always have good, fresh stores for winter.

Brother bee-keepers, give all the offered new "improvements" a fair trial, and "hold fast to that which is good;" and do not forget to report your experiences for the benefit of the fraternity.

Longmont, Colo.

◆

"Bees and Honey" is the title of one of the very best books on bees. The present edition is largely re-written, and is fully up to the times. It is profusely illustrated.—*Farm, Field and Stockman.*

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

◆

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Unfavorable Season for Bees.

Last year was the best honey year I ever saw. I commenced the season with 26 colonies, increased them to 54, and secured 3,000 pounds of fine comb honey. This season, so far, has been unfavorable. I began with 46 colonies, that had wintered well on the summer stands, but after apple-bloom they killed off the drones. They have swarmed very little, and are tardy in going into the surplus sections.

Wm. Shier.

Marlette, Mich., July 8, 1890.

◆

Bees Threatened with Starvation

I have 250 colonies in four different places, and not one-pound section of honey from them yet; I have seen only one hive with any signs of white along the top-bar. Bees in this county are on the point of starvation.

G. G. Baldwin.

Port Huron, Mich., July 8, 1890.

◆

A Good Season for Bees.

I am happy to say that we have, at last, one good season for bees. I never knew them to do better. Good weather struck us on June 17, and still continues. When it has rained, it was in the night, and the bees have lost no time. All the conditions are just right for honey and queens.

Henry Alley.

Wenham, Mass., July 7, 1890.

◆

Poor Prospects for a Honey Crop

Our prospects are very poor for a good honey crop this summer. Clover and bass wood are just about gone, and we have very little honey yet. The brood-chamber is well filled, but only a little in the sections yet. Our only hopes are for a fall honey-flow for surplus honey. Bees are in good condition—all colonies are strong, but not inclined to swarm much. Out of 220 colonies I had only 35 swarms. Black bees are swarming a good deal, and going to the woods. I still hope to get some honey yet.

N. Staininger.

Tipton, Iowa, July 9, 1890.

A California Flower.

Will you please tell me if the enclosed sample flower is golden-rod? If it is not, can you describe the California species, so that we may know when we find it?

Mrs. P. W. Minthorn.

Terra Cotta City, Calif.

By request, Prof. Cook replies to the foregoing questions as follows:

The plant sent is not golden-rod, nor is it at all like it. I think that any one who will examine the figure of golden-rod in the last edition of my "Bee-Keepers' Guide," will easily distinguish the plants. It is a composite, so there are many flowerets on one head. The colors are usually yellow, and the spreading shape of the flowers makes it easy to identify these, which are among the most beautiful of our American flowers.—A. J. Cook.

◆

New Jersey Tea.

Will you kindly state, through the Bee Journal, the name of the enclosed flower, and whether or not it yields nectar? It abounds here in a wild state.

R. B. Schofield, M. D.

Newark, Mo.

[Prof. C. M. Weed, to whom we submitted the above question and sample of leaf and flower, answers thus: "Apparently it is New Jersey tea, *Ceanothus Americanus L.* According to Gray, the leaves of this plant were used for tea during the Revolution." Whether it yields nectar or not, we are unable to say.—Ed.]

◆

Bee-Keeping in Louisiana.

My bees are doing very well so far; I have extracted up to 30 pounds per colony. The swarming amounted to about 50 per cent. increase. We are selling honey here at 75 cents per gallon. I will sometime send a sample of my honey. It is different from Northern honey in flavor.

A. Brandt.

St. Sophie, La., July 1, 1890.

◆

A Queer Year for Bees, etc.

This has been a remarkably queer year for bees. The winter was mild; there was plenty of brood, but no honey in apple-bloom, so half of the bees starved during the last of May. As we had no honey the past three years, I was disgusted and discouraged, and so I fed only enough to keep the bees alive. I lost none, and so when the honey-flow did come, the bees had dwindled to mere nuclei, but it beat all for honey that I ever saw.

It always pays to have "new blood" in the apiary; I have a few queens of that kind, and they have had no better chance than the bees by their side, yet they have stored 40 pounds of honey, and some of the others have not stored a pound; so I think that it pays to give 75 cents or one dollar for a new queen. If I had fed my bees so as to have held them where they were on April 5, I could have had 1½ tons of honey, where I now have only half a ton.

My bees did not swarm too much—I had only 12 swarms from 45 colonies, spring count. The swarms were small, and the bees around here seem determined to leave for the woods. I account for it in this way: It has been so very warm, and the farmers being so busy they did not shade the bees.

D. R. Rosebrough.

Casey, Ills., July 7, 1890.

Alsike Clover for Bees.

My bees are working strong on the Alsike clover. I sowed two acres of Alsike the past spring, and I think that it is the best thing there is to plant for bees. One thing I find about Alsike is, that it will bloom nearly all summer if it is not too dry, and blooms two or three times a year, if pastured or cut at certain times. The bees in this part of the State did not winter well last winter, the diarrhea seems to be the main trouble with them. D. B. CASSADY.

Litchfield, Minn., July 7, 1890.

First Surplus from White Clover

The seasons of 1888 and 1889 were failures as to surplus honey in Southwest Missouri, though I extracted about 500 pounds from my apiary during those two years. I have about 75 colonies now in fair condition. They have stored surplus from white clover for the first time in this part of the country. It has increased tenfold since last year. The temperature has been very high here during June, but has lowered some during the last two days. The prospect is good for a crop of sumac honey.

J. J. ELMORE.

Bower's Mills, Mo., July 1, 1890.

Small Loss in Winter, etc.

My bees wintered out-of-doors as usual last winter, and I lost 2 colonies out of 24. I have had only 9 swarms to issue as yet. Bees are storing honey quite fast. My bees, for winter, have a warm, sunny exposure, and are protected from the north and west winds. I use mostly Langstroth hives, and pack the top of the hive with pillows stuffed with dry leaves or straw, and I do not remove these until the weather is quite warm. I use 9 brood-frames, and let the colony lay in a good supply of early-gathered honey for their winter stores, before asking them to store in the sections.

R. A. WILLIAMS.

Poultney, Vt., July 4, 1890.

Honey Crop a Total Failure.

The white honey harvest here is a total failure. I do not think that I could find 100 pounds of capped honey in my apiary of 165 colonies, and have had but 9 swarms to this date. My scale hive is losing in weight every day. The weather here is extremely dry. J. V. CALDWELL.

Cambridge, Ills., July 10, 1890.

Bees Filling the Surplus Sections

The bees are just filling the surplus sections on the double-quick. My bees did their first swarming on July 2, and I decided that the best thing I could do was to send them back, and so I did with six of them. I am getting lots of honey by doing so. The white clover is plentiful, and the farmers have sowed lots of buckwheat.

M. M. RITTER.

Canoga, N. Y., July 8, 1890.

Dry and Hot Weather.

I have 29 colonies of bees, and had but one new swarm. All wintered well, and are very strong. The first part of fruit-bloom was good, and white clover followed closely, but only lasted two weeks; now there is not a bloom of any kind to be seen, that bees can gather honey from—everything being dried up here. Meadows here will burn like dead grass. Corn is suffering badly, and can hold out but a few days—the tassels turn white the next day after it appears. The mercury has been 105 degrees in the shade for several days, and the nights are so hot that the most tired people cannot rest.

This has been our lot for the past three days, with but one shower that would lay the dust, and it begins to look as if we will have to look for some other quarters to winter, if we do not soon have a change. I made large calculations for my bees to do the work, and I to get the reward, but I will make it the other way now, as I will have to go to feeding. The bees have some honey in the sections, but they are carrying it down-stairs. I feel somewhat disappointed, as $500 was the "pile" I had posted in my mind for this season from 29 colonies, as I got $200 from 12 colonies last season, and not well attended, either.

E. L. KIRK.

Pulaski, Iowa, July 10, 1890.

A Short Crop of Honey.

On May 1 I placed a box-hive on spring scales, and up to June 20 the pointer raised gradually; that is, they grew lighter, then they gained 2 pounds each day until the first of July, when they came to a standstill. It rained three days, and for the last three or four days it has been so hot that they have done but very little. There has been but very little swarming, and what have come out acted strangely; they would go for the woods, or go back into the old hive. I have only two swarms out of 20 Cottage hives. There is plenty of white clover, but somehow they do not seem to get much nectar from it. The prospects here are for a short crop of honey. There is but little if any basswood in this region. What the bees will do on buckwheat and wild flowers, remains to be seen.

R. B. WHEATON.

Middlebury, Conn., July 8, 1890.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	$1 00	
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Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
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Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
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HONEY AND BEESWAX MARKET.

NEW YORK, July 7.—New Southern extracted is arriving freely, but the quality is poor, and prices are declining. We quote from 60@65 cents per gallon. New extracted orange blossom honey, 7@7½ cents. New extracted California white sage, 6@6½c. California light amber, 5¼@5½c. Beeswax, scarce and firm at 29@30c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 19.—We received to-day the first shipment of new comb honey from Independence, Mo.—nice white 1-pound sections, put up in handsome white crates holding 12 sections each. It sells at 15@16c per pound. Extracted, white, 5@6c; dark, 5c Beeswax, 25c.

CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, July 8.—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13c. A little fancy has been sold at 15c. Extracted from 6@8c. Weather is warm, but there is some demand. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, June 2.—The market for honey is in a fair condition. The old stock is getting out of sight, and values are sustained on choice qualities. We quote: Choice white 1-lb. sections, 13@14c; medium 1-lbs., 11@12c; dark 1-lbs., 9@10c; 2-lbs., normal. Extracted, in barrels and half barrels, white, 7@8c; dark, 6@6½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, July 8.—No new honey in the market, and no desirable old is left. It is quoted at 10@13c. Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, July 9.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, post-paid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

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HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.

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Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

GOLDEN **ITALIAN QUEENS** BY RETURN MAIL. See last week's Journal for prices.
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Its descriptions commence with the necessary work in the spring, and run through the entire Year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. It contains 114 pages, and is nicely bound in cloth.

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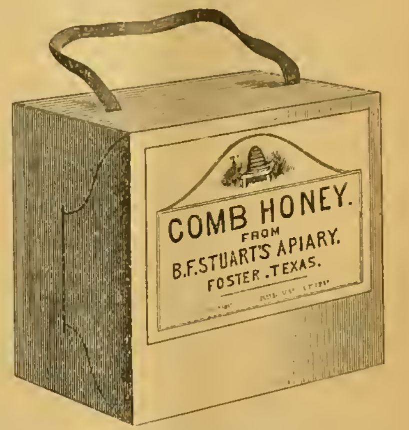
FOR COMB HONEY.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FREE **RELIGIOUS READING MATTER,**
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A. D. ELLINGWOOD, Milan, N. H.
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A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

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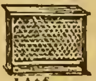

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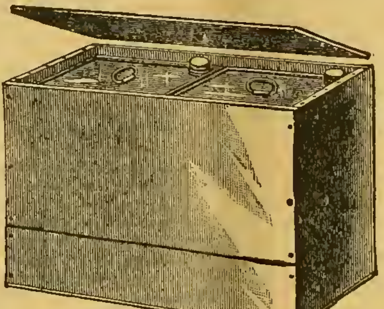
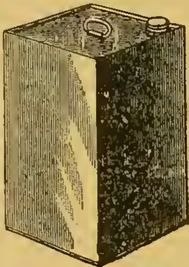


The above illustration shows the 60 pound Square Honey Cans which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

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For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1	Single Can .... (boxed)	$ .45
12	" Cans ... "	5.00
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1	box of two Cans	.75
12	boxes "	8.40
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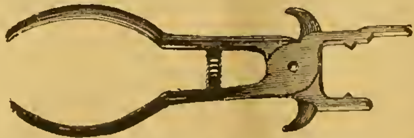

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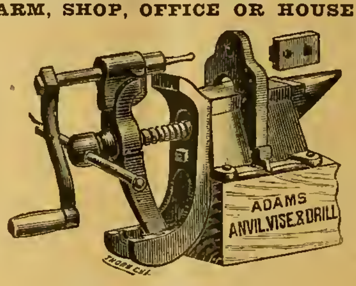

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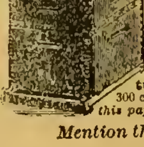

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. July 26, 1890. No. 30.

Texas Statistics. — Last year the total number of colonies in the State was 146,322 ; total number of pounds of honey, 2,610,100 ; total value of the honey, $257,989.

◆

☞ That grand old master in apiculture, Dr. Dzierzon, has again been honored. He was presented, on March 29, 1890, by Prince Luitpold, of Bavaria, with the order of St. Michael. The honor was well bestowed.

◆

Selling the Honey Crop too soon, and consequently at too low a price, is thus commented upon in a letter advising caution on the part of bee-keepers, by Prof. A. J. Cook, of Agricultural College, Mich. :

> I think that it would be well to caution bee keepers not to sell their honey too quickly. In this vicinity—and I fear we are not peculiar—the honey product has been almost nothing. It is as bad as it was two years ago. I believe that the price of honey must be very high, unless California fills the breech.

◆

The Hot Wave since July came in has been oppressive—the temperature keeping up into the nineties most of the time. The heat has dried up the nectar in many localities, and ruined the honey crop. In other places the crop is a fair one. On the other hand, it may be said, that the sultry weather has had the effect of ripening wheat very rapidly, and pushing forward everything which is approaching the season of harvest. An exchange remarks thus :

> Outside of the discomfort of such weather it frequently has a salutary effect on crops at this season, and a season without a few such days is not often among the most productive ones. It is freely predicted by many, though, that the summer of 1890 will be one of extreme heat.

Toads are enumerated among the Enemies of Bees. The following, from a correspondent, has just come to hand :

> Chatsworth, Ills., July 16, 1890.
>
> Some ask do toads catch bees ? I answer, yes, they do. *I know that toads catch bees.* I saw one do it ; in fact, I caught it in the very act. His toadship sat about 2 or 3 inches from the front of the hive, on the alighting-board, and about once in 2 or 3 minutes its tongue would dart out ; then came a snap of its delicate little mouth, and that was the last of the bee. I caught it and examined the contents of its stomach, and have sent to the Bee Journal specimen bees therefrom, and I think that the editor will agree with me that toads do catch bees. M. M. Miller.

Oh, yes ! we fully agree with that proposition, and have many times published the proofs that toads catch bees. In fact, in our Museum, there are the remains of bees taken from a toad's stomach. On June 9, 1883, Mr. W. A. Shewman, of Randolph, N. Y., sent us the following, which was published on page 313, of the Bee Journal for that year :

> A few evenings since I went out to my apiary, and in front of the entrance to one hive I discovered a large toad. I watched him a few moments, and saw him catch bees as they ventured out on the alighting-board. The toad would twist his mouth and turn from one side to another after swallowing a bee. I caught the toad and made an investigation. First cutting off his head I examined the inside of the mouth, where was found several stingers in the jaw and roots of the tongue, where the bees had stung him when he closed his mouth upon them. I then opened the body and pressed upon the stomach, when nine nice Italian bees came out, lifeless. Others remained in the stomach, enough, I think, to have made the number 18 or 20. In answer to the question, "Will toads catch bees ?" I can certainly answer, *they will.*

◆

The Rush.—By the time this issue of the Bee Journal is in the hands of the readers, we expect to have caught up with our orders on sections, etc., and will then most gladly resume our usual promptness in filling orders. The past season has been most perplexing and exasperating—because we were at the mercy of others, and were totally unable to fill promises made in good faith. We had laid in a stock which we thought was sufficient to meet all the requirements, but one which proved to be totally inadequate. Then fire destroyed the factories, and more could not be had as fast as needed.

Relief came, however, by the failure of the honey crop in many localities ; orders were countermanded, and the money refunded by the next mail, in all instances where the goods had not already been shipped. In no case was a letter or complaint left unanswered for a day ; this required much additional labor, but it kept our patrons posted, and told them as nearly as possible what to expect.

It is now all over, and very likely it will take all next season to use the goods ordered this year. On this account it will not be strange if next season's demand for supplies should prove to be *very limited !*

How Peculiar it sounds to talk about the seasons in New Zealand. Bees were put into winter quarters in May or early June. "Early spring" means August ! All of this will be seen in the "Seasonable Hints for June" in the New Zealand *Farmer* of June 1, 1890, which reads thus :

> Once more we have arrived at the season of the year when all the work in the apiary, at least so far as the bees themselves are concerned, should be finished for the next two months at least. They should even be snug in their winter quarters, but in case anything should have been left undone no time should be lost in setting things right. In the ordinary course of things it is better that the bees should remain as quiet as possible until the time comes round again for overhauling the hives in early spring, which will be sometime during the month of August.

◆

There are 280 persons by the name of "Newman" enumerated in the Chicago City Directory, which is just published. It is therefore quite essential when writing to us to put either "246 East Madison Street" on our letters, or to carefully write the *full name* of the firm. To write American Bee Journal on the corner of the envelope, will insure proper delivery.

A little care in addressing letters will save considerable annoyance, and perhaps delay or loss. Instead of 246, an order was mailed to us at 146 East Madison Street, on July 1, and it being a hotel, the letter was delivered there by a *new* letter carrier, and kept for some one to enquire for it. About ten days afterwards we accidentally heard that a letter was there addressed to us, and went after it. It was an order for goods, for which the writer was in a hurry. This is but one of the many incidents which exhibit the necessity for being particular in addressing letters. We always enclose printed "return envelopes" in our correspondence, to prevent mistakes.

◆

☞ At the Seminary at Lavel, France, a model apiary of 35 colonies of bees has been established, the proceeds and swarms to be divided among the teachers of the District, which has a tendency to draw men of learning into apiculture, and spread the industry and art among the people. It is strange, that republican France does not rule all its Districts alike. The President of the District of the Seine-et-Oise ordered that all enclosed apiaries must maintain a distance of 10 metres, and 2 metres high ; and all apiaries not enclosed, a distance of 100 metres from all adjoining neighbors ; in the Department of Seine-et-Marne, a distance of 25 metres is required, which order compels teachers and ministers to dispose of their apiaries.—*Translated from an Exchange by the Rev. S. Roese.*

◆

☞ Systematic work will pay in the apiary. Keep a note-book and record, and you will never regret it.—*D. B. Emery.*

GLEAMS OF NEWS.

Bee-Culture in Rhode Island.

The United States Department of Agriculture has just issued the "Experiment Station Record" for May. When speaking of the industry of bee keeping in Rhode Island, on page 296, it remarks as follows on the Report of the apiarist, S. Cushman, since his appointment in March, 1889 :

> A yard of 10 colonies has been established, and made as nearly as possible a model working apiary. The desired varieties of bees have been procured, a daily record taken of the weight of a hive, a show of bees in glass hives made at the County Fair, etc., used by prominent American producers, and designed as a permanent exhibit at the Station. Sixteen colonies were prepared for winter, 3 placed in the cellar, and the rest left on their summer stands, which were surrounded by a water-tight outer case.

The Report then sums up Bulletin No. 4 (pages 71 to 90), issued in December, 1889, thus :

> Statistics of this industry are quoted from the crop and other reports of this Department, and from the Rhode Island census of 1885. Improvements in hives, varieties of bees, and management of apiaries are described.
>
> The value of bees not only as honey and wax producers, but also as agents in the cross-fertilization of plants is urged, with quotations of the opinions of many authorities on this subject.
>
> The wide-spread belief that bees injure fruit is combated with citations from reports of the Division of Entomology of this Department, the published opinions of Profs. Packard and Gray, and the testimony of practical agriculturists in Rhode Island.
>
> Attention is called to the decision of the Supreme Court of Arkansas (June, 1889), that it is unconstitutional to prohibit bee-keeping, and to a recent German law (Oct. 1, 1889,) protecting this business.

It will thus be seen that we are *making history*. The Government Records now show that to "prohibit bee-keeping" is *unconstitutional!* That point is decided by the Supreme Court of a sovereign State of the American confederation ! Not only is this stated in an official document coming from the Agricultural Department of the United States Government, but reference made to a recent law passed in Germany, on Oct. 1, 1889, "protecting the business" of bee-keeping !

Whence all this interest in the "little busy bee" and its *rights?* Oh ! that is easy ! The National Bee-Keepers' Union has been at work ! With all its influence, power, energy—and money—it *protested* against the unjust laws of the corporation of Arkadelphia, which had cast into prison a bee-keeper, simply because he kept bees inside that city's limits ! The Union did not stop after "protesting"—it fought the Mayor and City Council—dosing them with arguments of law, decisions of law, and the unconstitutionality of prohibiting any honorable pursuit !

More than this, the Union hired the best attorneys in the State, and forced a decision from the Supreme Court, which gave justice to that honorable industry—honey production ! and at the same time preserved to every bee-keeper his rights under the Constitution of the United States of America !

And yet there are thousands who are deeply interested in the cause defended by the Union, who have never yet shown their appreciation by becoming members of it ! Impossible as it may seem—still it is as true as it is ungenerous. It shows wonderful apathy !

A Terrible Calamity befell an excursion party on the evening of July 13, 1890, while crossing Lake Pepin, in Wisconsin, on the steamer "Sea Wing." Of the sad disaster resulting in such great loss of life by drowning, the Rev. Stephen Roese, of Maiden Rock, Wis., who lives near the scene of death, writes as follows :

> We are in the midst of a dreadful calamity and great sacrifice of life, by the great tornado which passed over us last Sunday night. Among the number of towns and villages dotted along Lake Pepin, many people mourn the loss of some friend. The excursion boat leaving Diamond Bluff, took in passengers at all points of landing, for the Soldiers' Re-union at Lake City, Minn., on Sunday afternoon. In the evening, at 8 o'clok, when on its way back, the boat was struck by the tornado, and immediately turned bottom side up—only 33 persons out of 240 being saved. Among them was an innocent babe, which came floating the next morning to the Lake City shore, with a life-preserver on, alive and laughing, and as yet no owner has been found. Mr. Basey, the restaurant keeper, took the little navigator in as their own. My folks went there, and they said that the sight was terrible, as coats, hats, shawls, ribbons, etc., were floating on the lake. Up to this date, 84 bodies have been found.
>
> It seems as if a pall was hanging over this whole section of country ; every face one meets, carries a gloom.
>
> STEPHEN ROESE.

☞ "Practical Sanitary and Economic Cooking, Adapted to Persons of Moderate and Small Means," is the name of a new book by Mrs. Mary Hinman Abel. It contains the "Lomb" Prize Essay, which received the $500 offered by Mr. Henry Lomb, of Rochester, N. Y., in 1888, for the best essay written on the subject treated of, in this book of 190 pages. This essay on "The Five Food Principles, Illustrated by Practical Recipes," should be read by all who desire to become proficient in preparing for their tables, the most healthful and nutritious food. The work is commended to the public, with the belief that it is unequalled, and will be productive of most excellent results, if thoroughly read and practiced. It is published at 40 cents per copy, by the "American Public Health Association," P. O. Drawer 289, Rochester, N. Y.

Marketing California Honey.—Mr. R. H. Young, Secretary of the "Producer's Union," of San Diego, Calif., has this to say about marketing the extracted honey crop in that State ; much of it may apply as well to the honey-producers of other localities :

> The Producers' Union makes a few suggestions. Heretofore old cans and cases have been used quite extensively. The result has been to cause dealers to look with suspicion upon honey from this county as well as others of Southern California. Some who handled carloads last season lost quite a good deal because of the old packages in which the honey was put up. One or two of these have declared that they will have nothing to do this year with honey not put up in new cans and cases. Our honey-men should take notice of these facts at once. The new packages cost a little more than the old, but the honey will bring enough more to doubly make up the difference.

Transferring Bees.—In reply to several inquiries, we will say that Mr. Heddon transfers bees in the following way, which he claims to be far preferable to the old way :

> About swarming time he drives the queen and a majority of the bees into a forcing box, and then removes the old hive back a few feet, and puts in its place a hive with its frames filled with foundation, and pours the forced swarm in front of it. All field-workers will leave the old hive, and join the queen. It would be well to return a part of the bees to the old hive, for fear that the brood will get chilled, being careful not to take the queen. Twenty-one days after the forcing of the bees, Mr. Heddon drives the old hive clean of its bees, uniting with the former drive. The worker-brood is all hatched, and nothing remains but the honey and comb, which can be either transferred or honey extracted and comb melted.

☞ There must have been something sweet about a clothing store down in Bangor, Maine. A telegram announced on July 3, that "the clothing store of Frank D. Pullen & Co., was invaded by a cloud of bees yesternay, which cleared the store of the proprietors and clerks, and occupied it to the exclusion of all others until night, when they were finally driven out."

☞ The "Seven Modern Engineering Wonders of the World," described by Arthur V. Abbott, with elaborate illustrations, in the August number of "Frank Leslie's Popular Monthly," are : The New Forth Bridge, Scotland ; the Eiffel Tower, Paris ; the New Croton Aqueduct, New York ; the Blowing up of the Hell Gate Obstructions, New York ; the Eads Jetties at the Mouth of the Mississippi ; the St. Gothard Tunnel, Switzerland ; and the Brooklyn or East River Bridge.

Quick Work.—I received the Globe Bee-Veil to day, and I am well pleased with it. I am also very much pleased with the quick delivery of goods. I received them in two days and a half after the money was sent.—Bert Viager, Moline, Ills.

Song of Bees and Summer.

Oh, listen—it is coming !
Don't you see the children running ?
Don't you hear the gentle humming
 Of the bees
 In the trees
In the meadows, on the leas ?

It is coming—lovely June time
With its golden, radiant noon-time
And its paradise of bloom-time ;
 Coming soon—
 Perfect June—
Even now we hear its tune !

Starry daisies, crimson roses,
Banks of moss whereon reposes
Violet, queen of woodland posies,
 These will come
 When the sun
Just a few more rounds has run !

Bluebirds, bobolinks and thrushes,
Sweet will break the wood's deep hushes
When the east with morning flushes
 On the hills
 And the rills—
All the air with music thrills.

—*Buffalo Express.*

QUERIES and REPLIES.

Swarming without Much Brood or any Queen-Cell.

Written for the American Bee Journal

QUERY 719.—1. Will bees swarm without much brood in the hive, or any queen-cell started. 2. How long do they swarm before the queen hatches, or is she hatched when they swarm ?—B.

1. Occasionally. 2. About eight days, as a rule.—G. L. TINKER.

Yes, when they desert their hives. The writer had better read a little on bee-culture.—DADANT & SON.

1. Sometimes they will. 2. Sometimes before, and sometimes after ; the time varies from nothing to several days.—J. M. SHUCK.

1. Sometimes, but not often. 2. It varies slightly ; about seven days. This, of course, in case of first swarms.—A. J. COOK.

1. Sometimes. 2. Usually in a normal condition a colony casts a prime swarm eight days before the new queen will hatch.—JAMES HEDDON.

1. Yes. 2. Anywhere from a few minutes to twenty days. Read up the bee books and papers Mr. (?) "B.," or else keep closer watch of the inside of the hive.—A. B. MASON.

1. Not generally, but there are a few exceptions. 2. The new queen generally emerges from the cell in about eight days after a prime swarm issues.—C.H.DIBBERN.

1. Rarely. 2. The first issues a week or ten days before the young queen hatches, and the second swarm goes with a young queen.—C. C. MILLER.

1. Yes. They may swarm from want of stores, moth in their combs, and many other causes. 2. From six to nine days, if the colony is in a normal condition.—J. M. HAMBAUGH.

1. Such a swarm would be abormal. 2. I have had a queen hatch as soon as the swarm was fairly out of the hive ; generally, however, the queen hatches about a week after the swarm issues, but the time varies.—R. L. TAYLOR.

1. They will sometimes swarm with no—or at least only the rudiments of, queen-cells—but never normally, I think, without a good deal of brood. 2. Usually 7 to 12 days.—EUGENE SECOR.

1. If the honey flow is good, Italians will *often* swarm without queen-cells ; but not without plenty of bees and brood. 2. In a normal condition, usually from 2 to 12 hours, but with a sudden flow of honey, they may swarm before a queen-cell is started.—MRS. L. HARRISON.

1. Yes. 2. It depends on conditions. As a general thing, look for queens from first swarms in 7 to 8 days ; in second swarms you will often find several queens come forth at the same time. I have picked up 7 dead queens in front of a hive the next morning after being hived.—H. D. CUTTING.

1. I have known them to do so. 2. To get an answer to this question, such as would be of value, I advise "B." to get some good text-book on bees, and study it carefully (say, "Bees and Honey" by the editor of the AMERICAN BEE JOURNAL), as too much space would be required to give an answer of value here.—J. E. POND.

1 Under certain conditions, yes ; as a rule, no. 2. The first or prime swarm comes with the sealing of the first queen-cell. The young queen from this cell hatches in seven days, and leads out an after-swarm two or three days afterward, if all is favorable. "B." had better buy a good bee-book, and "post up" a little.—G. M. DOOLITTLE.

1. In normal conditions bees will not swarm when there is little brood and no queen-cell. When there is plenty of brood, and the hive crowded with bees,and weather is hot, especially if the hive is poorly ventilated, they will sometimes swarm without starting queen-cells. 2. Usually a young queen is hatched in from six to eight days after the issue of a swarm with the old queen.—M. MAHIN.

1. When all the conditions for natural swarming are correct, they usually have plenty of brood and queen-cells started. Demoralized bees often swarm out and leave the hive in the conditions you state. 2. In this matter bees observe "no invariable rule." Generally five to eight days, but sometimes the first queen is hatched when the old queen leaves with the swarm.—J P. H. BROWN.

1. Not usually ; sometimes when the queen is old and feeble. In rare cases bees will swarm on a sudden impulse before cells appear to a close observer. One of my first swarms the present season went out leaving no queen-cells started. How often it occurs is a fact not always known, as the hive is not always opened immediately after the swarm issues. 2. If the weather is regular, and everything works by the general rule, the first young queen will hatch on the eighth day after the swarm issues.—G. W. DEMAREE.

1. Abnormal swarming often occurs ; but when bees are in a normal condition, they do not swarm with no brood in the hive—nor queen-cells started. When it is very *hot*, or in the midst of a great honey-flow, they sometimes leave the hive for want of room, in the condition stated in the question. 2. The old queen leaves with the swarm six or eight days before the first queen is hatched.—THE EDITOR.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

BIOGRAPHICAL.

Rev. Dr. John Dzierzon.

John Dzierzon, born in 1811, in a village of Middle Silesia, studied, in 1830, at Breslau, Roman Catholic theology, having, at the same time, a strong inclination for natural history studies. In 1835 he was located as priest at Carlsmarkt, in Silesia. His parish was small, and his labors light. All his spare time was given to practical bee-culture, and the careful study of all the previously published bee-literature, and the careful testing of the various discoveries concerning the nature of the bee.

Of great value to him now, in his observations and experiments, was his arrangement of the hive with movable combs, which he used long before they were known in other circles. His first essays appeared in the *Frauendorfern Blattern*, His first contribution to the *Eichstadter Bienen-Zeitung* appeared in No. 12, 1845, page 122. Shortly afterwards, a new and improved system of bee-culture, by Pastor Dzierzon, was published by the Bruckisch, commonly called "Theorie and Praxis." So little profit did Dzierzon then anticipate from this valuable work, that he allowed it to pass into other hands, and it was published with various notes, which served to deteriorate and mar it.

Later, this supplement to "Theorie and Praxis" was published under commission by Beck, in Nordlingen. Since 1846, he has been a constant contributor to the *Eichstadter Bienen-Zeitung*, and, at the great annual gatherings of the German bee-keepers, he is the king around whom they all cluster.

But he had a hard battle, until he had broken the way, and made such able opponents as Busch and Baron von Berlepsch, his friends and well wishers.

It is well known how he searched deeper into the natural history of the bee, and called to his aid the honored zoologists, Leuckart and Von Siebold. The result of all his scientific researches and practical experiments, he gave to the world in his great work, the second edition of which was published in

1869, by Schneider, in Mannheim—"Die Biene und ihre Zucht mit beweglichen Waben in Gegenden ohne Spatsommertracht."

In the *Bienen-Zeitung*, Pastor C. Weygandt, another eminent German bee-keeper, wrote the following concerning Dr. Dzierzon, and his great work as a progressive apiarist :

"The prophet passes for naught in his own country." This popular quotation cannot be applied to the grand master of German apiarists. The name of Dzierzon has the purest sound upon every German tongue, and finds the gladdest echo in every German heart.

Dzierzon is the father of rational apiculture in general—the reformer of German bee-keeping in particular. Through him, bee-keeping has been enrolled into the rank and file of scientific professions, and has been elevated to its importance in national economy. Dr. Dzierzon has stamped from out of the ground bee-keepers in numbers just as countless as the dew, which the lovely Aurora brings forth in the morntng.

Few were the years of disregard which were imposed upon the Dzierzon System as a fire ordeal ; it was at the time when the grand master for the first time lifted up his prophetic voice in the wilderness and cried, "Repent!" but ere long the new "theory and practice" found a path for itself, and at the end of 1855, Father Dzierzon could count as his own, all bee-keepers of prominence, without exception.

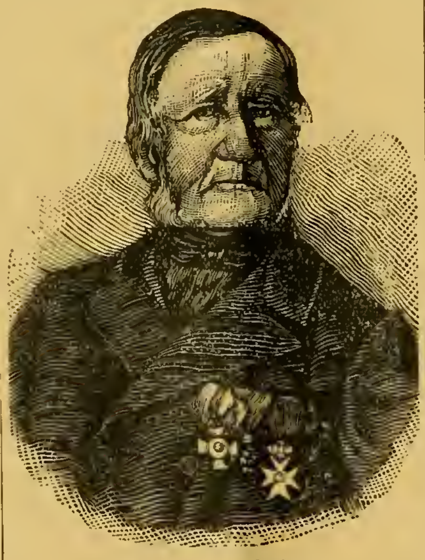
And thus it is yet this day : "He counted the heads of his beloved ones, and see ! not one of the dear ones was missing !" And if in any way or anywhere one or the other point of Dzierzon's teachings are questioned—the whole system never is criticised ; it is valued by the most hot-blooded combatant as sacred, before which he must pull his shoes from his feet, from his hand the pointed quill, and from his heart all resentment.

Amidst the world of Germany's bee-culture, there exists this day only one school of apiculture (old-fogy "shoots" do not count), with many classes, it is true. This one school of many classes is essentially known throughout the whole world, through its founder—Father Dzierzon.

We should think that he who would dare to lessen the merits of Dzierzon, would render himself liable to immortal ridicule. One can perceive with his eyes, and feel with his hands the truth of Dzierzonism (permit me to make use of this new word). With the naked eye, and still better, with the eye armed with the microscope, we can see that the parthenogenetic generation of drones and drone-eggs is an irrefragible fact. We see with and without "spectacles" the advantages of bee-keeping with movable combs ; they lay upon our palm, the sparkling pieces of gold.

Notwithstanding this, it has been attempted more than once (although,and gladly do we say it, not within the fatherland of the prophet) to rob the name of Dzierzon of its pure fame. One of those attempts had for its purpose to deny to Dzierzon the merits of of having enriched natural science through his discovery of the parthenogenesis. This attempt has been repelled without any trouble, but with an overpowering keenness of thought.

Baron von Rauschenfels and Prof. Sartori have, in their excellent book, "L'Apicoltura in Italia," spoken of German apiculture, and especially of its regenerator, Father Dzierzon, with the most commendable respect. Without envy, they have shown in their true light, all the noble achievements of our grand master. Among other things in their book, they mention the following facts :


Rev. Dr. John Dzierzon.

"The first one who raised the veil a little which hid from our view the natural history of the honey-bee, was the renowned Swammerdam, a Hollander, the unexcelled anatomist of insects. After him followed Huber, of Geneva, whom we are pleased to call the father of modern apiculture, because he has left with us in his '*nouvelles observations sur les abeilles*,' a true law-book of apiculture, an authentic and safe guide, for all apiculturists.

"But, nevertheless, there were a great many things yet unknown or undecided, especially in reference to the sexual relations of the bees and the fructification of the queen, when a new, bright star appeared upon the apistic heaven of Germany—Dzierzon, to whom is due the glory of having frightened away with the torch of his imperishable intelligence, those shadows which as yet envelop the real (inner) life of the bees. As Dzierzon desired to have the bees right under his own eyes, he formed those small horizontal boards (in the hives of Mr. Christ), by means of which he discovered the movable sticks, a discovery which brought about a complete change in the science of apiculture, as through this it gained a more practical, rational and advantageous direction.

"After he had invented the movable stick, it was not difficult for him to discover a better habitation for this insect—a hive in which those little boards, the origin of our frames, could be handled conveniently. With this astonishing talent of observation, Dzierzon gradually brought to the clear light of day, one after another of those dark points, in reference to the anatomy and physiology of the bee."

All of these scientific, unprejudiced and poetical sentiments will receive the endorsement of every German bee-keeper. More concisely and more truthfully von Rauschenfels and Sartori could not have treated the theme, "What do we owe to Father Dzierzon?"

In reiterating simply the Italian verdicts in reference to Dzierzon, I have therewith already accomplished my seeming task, which was to sit in judgment, pupil-like, but going to the bottom, over our grand master. The final opinion of every impartial meditation in reference to the merits of Dzierzon, must end with the following rhymeless strain :

Free and great, as none besides him, stands the bee-keeper Dzierzon, within the world of apiculture, honored and beloved as the father of rational apiculture, and the coming centuries, with their surging billows, cannot wash off a particle of the pure fame and the glory of his name !

To aid our readers in securing a fuller knowledge of Dr. Dzierzon's valuable ideas of apiculture, we are pleased to be able to supply his book on "Rational Bee-Keeping" (translated into English)—a work of nearly 350 pages—which was published for $2.00 a copy, bound in cloth, and $1.50 when bound in paper covers ; but in order to place this book in the hands of all interested in the progress of our pursuit both in Europe and America, we will mail the volume bound in cloth, postpaid, for $1.00 ; or bound in paper, for 75 cents.

CORRESPONDENCE.

HIVES.

Large or Small Hives—Bees Unloading the Honey.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

On page 325, our good friend, Chas. Dadant, labors under a wrong impression, in thinking that Doolittle does not know how to manage large frames. I think he does to a certain extent, though not equally well with the small ones. If Mr. Dadant would be perfectly fair to his readers, he would tell them in these hive-discussions that he works for extracted honey, and that his articles are written from an extracted-honey stand-point, doing the same as plainly as I have always told the readers, that small hives and the contraction plans are to be used only when working for comb honey.

While I am free to admit that what Mr. Dadant says in his first sentence in his article on page 325, relative to my not having used large frames for the production of comb honey, yet I am equally certain that he is as ignorant of the best hives and methods of producing comb honey, as I am of the other. When it comes to extracted honey, we want large hives, every time, as I have often said in the columns of all the bee-papers; but to produce comb honey to the best advantage, no one, to my knowledge, uses such a hive as Mr. D. recommends; therefore I do not see wherein we disagree as badly as it is claimed, when the reader understands the plane of thought from which Mr. D. writes.

On page 326 he tries to take the report of a bee-convention as given by an ordinary newspaper reporter, to corner me with. If he had read my reports in the bee-papers of this same colony which gave the 566 pounds of honey, as carefully as he did that convention report, he would remember that I said that this colony had brood in 32 combs, to the amount of *about 15 full frames.* I gave it so at the convention, but the reporter made me say 32 combs filled with brood.

Again, any reasonable person would consider it impossible to extract 566 pounds of honey out of 32 combs which were kept full of brood all the time. Now, this hive was worked for extracted honey, to see what could be done with a colony of bees under favorable circumstances, and was set apart for this special purpose at the beginning of the season.

Another colony of about equal strength was set apart for comb honey, and worked the same as I have advised working with a small hive and the contraction system, and this colony gave 309 pounds of comb honey. Was this a bad yield? or did it "exist only in imagination?" In either case, it was accomplished with a colony worked in one of those small hives, and the whole apiary worked on the same plan, gave over 200 pounds on an average from each colony that year.

When I came to sell the 309 pounds of comb honey, it brought $16.72 more than did the 566 pounds of extracted, and in this Mr. Dadant will find the solution of his saying, "It seems to me that such a good crop would have increased, instead of lessened, my preference for the large hives."

If I could dispose of extracted honey at as paying figures as I can comb honey, then I certainly would work my apiary for extracted honey, and would as certainly use large hives; but when I must work for comb honey to secure the greatest amount of pay for the same amount of labor, then it is that the small hives are the things to use.

I told the readers of what I preferred, from a comb-honey stand-point, so as to give my mite to those who wished to try my plans and benefit them, as I have been benefited in the past by the "mites" given by others to help me along. I freely accord to Mr. Dadant the same privilege, and am glad that he gave us the article he did, so I will not return his compliments by saying that he does not know what he is talking about, or that what he says only exists in imagination. The field of bee-culture is broad enough for all, and as I have said before in these columns, all are free to use what I describe, or equally free to let the same alone.

BEES WITH LOADS OF HONEY.

In an argument relative to the digested-nectar theory, I see it stated that in harvest time the bees "go and come, load and unload, as rapidly as possible, and deposit their loads directly into the cells." While I have no comments to make on the rapidity with which they go and come, load and unload, yet I wish to say that I believe the claim that they deposit their loads directly into the cells, is a mistaken one.

I have watched the bees for hours through the glass of a single-comb observatory hive, and I never yet saw a bee, upon coming into the hive from the field, deposit its load of honey in a cell. I do not say that they never do so, for I think that there may be times when there are so few young bees in the hive that they cannot take the nectar from the field-bees as fast as brought in.

All of my observations go to prove that when a colony is in a normal condition, all the field-bees give their loads of honey to the young, or nurse-bees, and these deposit it in the cells after it is ripened, partially or wholly, unless the rush of honey is so great that these young bees have to deposit it in the cells before ripening, to keep up with the supply which is coming in.

When the bee comes in from the field, it passes quickly about the hive until it meets a young bee, when it puts out its tongue to it, and if this young bee has no load of honey, its tongue is put out to meet the other, when the load is passed from one to the other. If this bee has a load, another is sought until one is found that can take it. That only young bees are in the surplus department during the busy portion of the day, also points in the same direction.

In making swarms, this getting of the right proportion of young bees has an important bearing upon our success.

Borodino, N. Y.

SUPPLY DEALERS.

Comments on the Subject of Ordering Bee-Supplies.

Written for the American Bee Journal

BY MRS. B. J. LIVINGSTON.

The article on page 470 was not written by *my* "supply dealer;" such an article would discourage a beginner, who does not know what he or she wants. The "Fikes" letter was a model business letter, compared to the first one I wrote to a supply dealer. I suppose you could not imagine such ignorance, but please remember that a life spent on a frontier farm, raising boys instead of bees, with scarcely ever a ticket of leave from the farm, one does not keep "booked up" with all outside interests. So, when my boys no longer needed all my time, the bee-keeping fever began to burn.

I had the catalogue of but one "supply dealer" at that time; I wrote him that I wished to begin bee-keeping in a scientific way, on a capital of about $10.00—that I knew nothing of it, had no bee-literature, did not know a section from a bottom-board, and I actually asked him to advise me as to the best investment that I could make to start me right. I told him that I had three "swarms" of black bees in "boxes and things."

Now that letter would have thrown Mr. "Supply Dealer's" clerk into hysterics; but the one I dealt with, wrote me in a very gentlemanly manner—made out the bill, advised me what books to get, and the periodicals to take. I sent him the $10.00, and never added a dime apiece for the questions! Well, the more I read, and the more I saw, the more I wanted, until I sent him over $20.00 before the first season was fairly under way.

Now in my case, I never could have gotten started rightly if I had met with a "cranky" supply dealer. So, gentlemen, have patience with beginners, even though you employ an extra clerk and charge for it in the bills. Our bee-keepers have not all attended business colleges, but were kept behind, perhaps, by stern duties that will cripple them all their lives. So, be patient with us all—it will pay you best to do so, in the long run.

Centre Chain, Minn.

COMB HONEY.

The Proper Management for Its Production.

Read at the Ontario Convention

BY F. A. GEMMILL.

In preparing an article on the production of comb honey, I certainly feel my inability to do full justice to this interesting part of apiculture. I trust, therefore, you will overlook any apparent attempt on my part at posing as an authority on the same; especially as this essay is intended for the amateur rather than the expert.

I may as well state right here, that much of my information has been received from the perusal of the various bee-periodicals, the attendance at conventions, and from conversation, with friendly bee-keepers, all of which is of great benefit to those engaged in the production of honey in any shape whatever. I wish, too, while on the subject of conventions, to mention that I never yet attended one, but that I was more than repaid in dollars and cents aside from the pleasure afforded from meeting other bee-keepers.

While much depends on the style of hive used, still too much stress can be laid upon this point, as more actually depends on the character and duration of the honey-flow, the mode or system carried on by the operator, and his love for producing this particular kind of nature's sweets in the best marketable shape. All hives and supers should, however, be of the same outside dimensions, in order to permit thorough tiering, one above the other, and all painted alike in color if possible. Again I am painfully aware that but a short distance in location makes a very great difference in management, so that one must be thoroughly posted as to his immediate vicinity regarding flora, etc.

I will now proceed with the result of my experience, combined with the information received as already stated, and it may surprise some to learn that the method actually commences with the successful wintering and springing of the bees themselves, as very good, strong colonies having prolific young queens are what is required for this purpose. Weak colonies are only a vexation, and should be doubled up at the commencement of the honey-flow proper, or assisted with hatching brood taken from the colonies that have just swarmed. When little or no increase is desired, this system will prove very satisfactory. The time for placing on supers is generally when the bees begin to whiten the tops of the brood with new wax; instead, however, of giving them a case of prepared sections, I prefer adding a half story of drawn comb above a queen-excluding honey-board, and the giving of such a super is preferable for the following reasons:

1. The bees are less inclined to swarm, as they enter it more readily, thus relieving the pressure on the brood-chamber by the depositing therein of honey from below, or that newly-gathered from the fields.

2. The centre sections are generally occupied first, especially if the honey comes in slowly, and consequently these sections are first filled and sealed, becoming travel stained by the bees before any of the outer ones are ready for the additional room, thus affecting the snow-white appearance which all comb honey should possess if possible.

3. I have not been able to dispense with the use of separators when giving a case of sections before the super of drawn combs referred to, as the center sections are often bulged (for the reasons given in No. 2) to such an extent as to render crating them a great inconvenience. I have little or no trouble, however, in this line, provided the supers are well filled with bees throughout, and the honey is coming in rapidly.

4. As soon as the half story is about two-thirds full of honey, and capping has commenced, it is then raised up and a full case of sections containing either starters or full sheets of thin foundation is inserted between it and the brood-chamber.

5. With me the first honey deposited in the surplus department is not as nice in color or flavor as that gathered after the flow is thoroughly established, therefore as soon as the bees are nicely at work in the sections below, it can be removed, the honey extracted as a second-class article, and again replaced on another colony to be filled with a first-class article of extracted honey.

TREATMENT OF SWARMS.

Swarming is generally expected about this time, and as I practice the cutting of the queen's wings, for reasons too numerous to mention at present, the swarm is treated as follows, viz:

As soon as it commences to issue, the hive is approached and the queen secured in a small wire-cloth cage, and while the swarm is still in the air, the parent colony is removed and a new hive is substituted, containing five Langstroth frames, or their equivalent, filled with foundation, the balance of the hive being filled with dummies or division-boards, or a still shallower brood-chamber may be used, containing starters only, and the bees allowed to build their own combs. As soon as the swarm returns, and about one-third of the bees have entered the hive, the queen is liberated, and allowed to run in with them. The surplus arrangement is now removed from the old colony and replaced over the new one, having a queen-excluding honey-board as before, when honey-storing goes on apace as though no swarming had taken place. If little or no increase is desired, the bees are all shaken from the combs of the parent colony in front of the new hive, and the brood placed above the queen-excluding honey-board, on other colonies that have not yet swarmed, and as fast as the brood hatches from them they are filled with honey for replacing in the brood-chamber proper, in the event of any being short of winter supplies.

If, however, increase is desired, the old colony may be left intact—in other words, the bees are not to be shaken from its combs, but allowed to remain alongside the new one, its entrance being turned away at an angle of 45 degrees, and gradually moved close to the new one so that at the seventh or eighth day the two hives are side by side. Now, at mid-day, when most of the bees are flying, the old colony is removed to a new location in the apiary, thus depriving it of nearly all the field-bees, which go to replenish the new swarm, and at the same time depopulating the old one to such an extent that no further swarming may be expected. This latter plan is termed the Heddon method of preventing after-swarms, and has proved a success with me in every instance when properly carried out.

Additional section-cases are given from time to time as required, care being taken, of course, that too much room is not given, and as a result a large quantity of unfilled sections when removed at the close of the whole honey harvest. After assorting out all those not sufficiently filled for market, the honey may be either extracted, or the sections returned to the hives in order that the bees may remove the honey below, when they can be stored away for next season's use.

The brood-chamber is again enlarged to its full capacity for securing the benefit of a fall flow, should there be one, or for inserting well-filled combs from the top stories of other colonies.

I have only to add, should any one think there is too much labor involved in following out this system, and knows of a better plan (there are other good ones), yet has not the time or inclination to attend to either, let me advise them to stick to producing extracted honey exclusively, as this can be done with less time and attention, and also the controlling of the swarming fever, brought more under subjection. Apiculture unfortunately, like many other pursuits, is not altogether devoid of its hardships, and to him that would succeed, a determination to overcome all obstacles is imperative. Failure is sure to come sooner or later, and if any here present, think of entering it from a dollar-and-cent point of view only, with little or no love for the pleasure there is in it, they had better think a second time before investing much capital therein.

Nothing is further from me than that I should, by any remark of mine, discourage those contemplating a trial, as I entertain no motive whatever, much less one of selfishness, other than advising the amateur to go slowly, for experience can sometimes be purchased too dearly, as many already know to their sorrow. Again, "nothing succeeds like success," and there is no reason why you should not succeed as others have already done.

Stratford, Ont.

LINDEN.

But Little Basswood Honey this Year.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

This tree (*Tilia Americana*) is also called the "lime," and Prof. Cook has it enumerated as a July honey-plant, which, no doubt is true for the States of Michigan, Wisconsin, and others of the same latitude. It bloomed this year in this locality June 25, which is about one week earlier than usual.

About twenty years ago Dr. Lucas, who was then a very enthusiastic and scientific bee-keeper, planted linden trees around a city square, of both the American and European varieties. He has since passed over the divide, but the trees bud and blossom, shedding their sweet perfume as incense to his memory, and affording refreshing shade to weary travelers, joy to merry songsters, and yielding precious nectar for bees and man. Such a monument affords more joy and pleasure than one from chiseled marble.

To-day I visited these trees, and found that the bloom was sparse, as is common with all other trees of this kind, in this locality, owing no doubt to the May freezing. There is very little bloom remaining now, and that only upon one side of a tree. The remainder contained neither seed-balls, buds nor blossoms. The seed-balls resemble the buds before they open so much that many watch for the bloom when it has flitted by. The bloom yielded nectar this year, but there was so little of it—there was hardly enough to pass around.

THE WHITE HONEY HARVEST.

I am glad to say that I am not feeding bees at present. During the past fortnight they have been able to gather a little more than a living, but the surplus of white honey amounts to almost nothing, and white clover is almost gone. Sweet clover (melilot) is just commencing to bloom.

VERY FEW SWARMS.

The increase has been small, very few swarms issuing. If I had not had comb to give them, most of them would have been returned. I never had as many prime swarms, when the sun was past the meridian as this year, or lost as many queens during swarming. A bee-keeper of a dozen colonies living near, has been watching eagerly for his bees to swarm, but has had none ; and one day lately, seeing many bees in the air, he went out to see from which hive they came, and was surprised to see that the bees were not coming out, but down, and entering one of his unoccupied hives. He had noticed before, that bees were going in and out of that hive, and as it contained comb, inferred that they were seeking honey, but was now convinced that they were cleaning it out, preparatory to taking possession of it ; and he gave them a hearty welcome.

HOT WEATHER—VENTILATION.

The thermometer has been playing around 100 degrees in the shade for eight or ten days, and yet no combs have melted down, as bees understand the art of ventilation so well. By giving ample ventilation, enlarging the entrances and raising the covers, fewer fanners will be necessary, and more laborers can go to the fields. It is better, during such extreme hot weather, to shade the hives, although sunshine is preferable during spring and fall.

Peoria, Ills.

BOGUS HONEY.

What Measures Should be Taken Against this Business ?

Read at the Missouri State Convention

DR. C. C. MILLER.

As this essay is merely intended to open discussion, I will make it suggestive rather than attempt to treat it fully. The discussion of members will bring out more fully the particular local phase of the question, and in that the proper steps to be taken may be discovered more fully than can be done by one not fully informed.

I suppose the bogus honey under discussion to be adulterated extracted honey. One of the first questions occuring is—how much adulteration is to be found ? I had supposed not so very much of late, as the statement has been frequently made that honey is now so low, and glucose so high, that adulteration is not profitable. Stringent laws against the adulteration of all food products are eminently proper, and may do much good.

Without saying what may be the best means to drive out adulteration, let me suggest one means within the control of bee-keepers that is too much lost sight of. A good many years ago when I was young in the business, some honey that I put on the market was objected to on account of its quality. I stubbornly defended it, taking the ground that "honey is honey," and that this was a pure article just as it came from the bees. This was very true, but it was also true that however pure it might be, it was a very vile article in smell and taste.

As nearly as I can remember, at this distant time, it was a very dark and very ill-tasting sample of plant-louse honey, withal somewhat soured. Instead of withdrawing it from the market, I left it until all was sold out, and I suspect my home market is poorer to-day in consequence. I surely think I educated a number of people that honey was, or might be, a much poorer article than they had supposed.

Now if I was allowed to sell such an article, why should not a good article of glucose with a better taste and a better appearance be sold, always providing it be sold under its real name ?

If, on the other hand, a customer has never tasted any but the best quality of honey, will not his taste thus educated, be a pretty good safeguard against the purchase of an adulterated article? I do not think I can tell by the taste whether a sample of honey is pure or not, can you? But I can tell whether it is a real good article, and so can you. Can you not distinguish between an adulterated and a pure article, provided the latter is of the very best quality? And suppose all your customers are as well educated as you, how much bogus stuff will they buy in the presence of A 1 pure honey?

Now how much of the extracted honey that is sold is just as good as can be secured? Have not you, and you, and you, sold extracted honey that was more or less sour? I venture the guess that more than half the extracted honey on the market is more or less sour.

If I am correct, then there would be at least a heavy blow given the bogus business, by seeing that every drop of honey put on the market is thoroughly ripened, and if any of it is a little "off" in flavor, let it be graded accordingly, and not sold for table use.

Marengo, Ills.

UNITING.

How to Unite Weak Colonies—Pasturage for Bees.

Written for the Iowa Homestead

BY WM. H. GRAVES.

I always try to keep a record of the qualities and age of queens. As a rule, I don't think it pays to keep a queen after she is two years old. If I have any preference, I destroy the poorest and cage the one I want for a day or two. It is generally unnecessary to do this when the colonies to be united are all or both weak. I sometimes unite three in one. By taking an empty hive and alternating the frames, there will be no fighting. Weak colonies are particularly subject to attack from robbers.

In overhauling the colonies, it is best to mark the ones strongest in stores, so that if any should need feeding, a frame of honey, or as many as they need, can be given them from those that can spare it. Nothing is better, but if honey can't be spared, sugar syrup is the next best.

It is best to feed in the evening, if there should be any disposition to rob. The practice of feeding sugar is only resorted to in cases of emergency. It is far better than to let them starve to death. It is also a good plan to clip one wing of the queen, although I am aware that some leading apiarists are strongly opposed to it. After having lost several valuable swarms by their going to the timber, I am fully convinced that it is far better to lose a queen once in a while, which is one of the principal objections urged against the practice than to lose a whole colony.

I have been clipping the queens' wings for about 15 years, and think that I have not lost a half dozen queens in that time. At this time the hive is not so crowded with bees, and it is not as difficult to find a queen as one might think, especially if Italians are kept. A black queen is harder to find, as they are more shy.

After having tried several honey-producing plants, I am of the opinion that land is becoming too valuable to devote to any plant that cannot be of some benefit aside from honey-production, of which Alsike clover undoubtedly stands at the head of the list for this locality. Perhaps buckwheat might be mentioned next, although I have discontinued the practice of sowing it for the past few years, for the following reason: It is an uncertain yielder, and I am located adjacent to a river-bottom where there is an abundance of black-heart, or heart's-ease (as it is sometimes called), which makes a finer and a far better grade of honey than buckwheat, although it belongs to the same family of plants.

Duncan, Ills.

VISITING.

The Wonders Seen by a Visitor to an Apiary.

Written for the Farm, Field and Stockman

BY S. E. MILLER.

For the sake of a name we will call him Mr. Shaw. As we drive up to the house we see in front of it a well-kept lawn studded with evergreens, and on one side is a pretty flower garden containing roses and beautiful shrubs. While on the opposite side of the house is an ample vegetable garden wherein may be found a bed of strawberries, as well as many other delicious fruits. But let us proceed to the apiary. Here we see hives all of one size, shape and color (white), nicely arranged in groups, or set separately at fixed distances on four bricks or pieces of two by three scantling all on a pretty lawn with an occasional shade-tree spreading its branches about the hives, and near by is a neat little house. "Oh! what a cute little house! What is it for, Mr. Shaw?"

"That is my honey-house; in it I do the extracting, remove filled sections from the supers, scrape, assort and pack the same for market, as well as a great amount of other work. In it also I keep my implements used in the apiary.

"What is extracting, Mr. Shaw?"

In answer to this Mr. Shaw proceeds to open a hive.

"Oh! please don't Mr. Shaw, they will sting us to death."

"Never mind, just keep quiet, and don't get nervous; if they come around your face don't strike at them."

Mr. Shaw then raised out two frames of comb containing honey, and after shaking off the bees in front of the hive, he said, "Come with me to the honey-house."

In the house he took one of the frames in his left hand, holding it over the uncapping can; in his right hand he took a honey-knife and shaved off the cappings on both sides, then he lowered it into the revolving frame of the extractor. After treating the other comb the same way, he put it in the opposite side of the frame. He then gave several rapid turns to the crank, and the honey was thrown out against the side of the extractor, where it ran down and was drawn off at a gate below.

"Well, I declare! Oh! just look at the comb honey!"

"How do you make it so straight, Mr. Shaw?"

"I do not make it; the bees build the comb, gather the honey, store it in the comb, and cap it over. Come, and and I will show you."

Mr. Shaw led us to a hive in which the bees were devoted to building comb honey. He raised the upper story, which exposed to our view a case with glass on both sides; this contained seven rows of one-pound sections, four in a row, with a tin separator between each row; here were combs of various sizes, from those just commenced to those completely filling the little boxes and nicely capped over.

"Well, did I ever! I have often seen just such in the stores, but I always thought it was manufactured; and what pretty bees and how gentle. Why, Mr. Jones' were black, and wanted to sting us. What kind of bees do you call these, Mr. Shaw?"

"These are gentle Italians, and are accustomed to being handled."

"Some of your bees are in the sun; is it not too hot for them?"

"My hives are all painted white, therefore the sun does not affect them much. Were the hives of a darker color there would be danger of the combs melting in hot weather."

"Well, Mr. Shaw, this has been to us a very interesting and profitable visit. We are much interested in the little workers, and are ever so much obliged to you for what you have taught us to-day."

"Not at all. Good day."

Bluffton, Mo.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Good Season for Bees.

The year 1890 promises to be the best we have had for several years. The white clover crop was a good one, and bees never worked harder on clover than they did two weeks ago. Then came basswood, about July 1, and I might mention many varieties of honey-plants if I could only name them. I have taken off, so far this season, about three times as much honey as I got all told last year. I have about as many colonies this year as I had last; at this time I have an apiary of 85 colonies.

John Moller, Sr.
Fremont, Nebr., July 12, 1890.

Robbing and Swarming.

I wintered 11 colonies last winter, and one of them was robbed recently when we were all sick. We lost a little girl 3 years and 21 days old on May 24. I have had 7 swarms up to date, one issuing yesterday. But I am unable to do much work yet, as I am very nervous.

A. J. Mathewson.
Hamlet, N. Y., July 12, 1890.

Half a Crop of White Honey.

There will be about half a crop of white honey in this vicinity, from the clover and raspberries, and there is not much basswood here.

A. W. Smith.
Parksville, N. Y., July 12, 1890.

Poor Season—Swarming.

I wish that I had something more encouraging to write. I lost 30 colonies out of 69 in wintering and spring dwindling, robbing, etc., but I presume it is as Mr. Heddon has so often said—it can all be accredited to poor wintering. Their stores were very poor, thin buckwheat honey, and they were wintered in the cellar. Everything considered, so far this is a very poor season for us here. The great basswood flow has come and gone, and not much surplus realized. I never saw so much swarming as there was through June, and they seemed to all be inclined to the woods. The air was full of bees, and the farmers caught a great many swarms; they came to me invariably for hives and information, and I pointed them to the American Bee Journal invariably, as their guide.

I am very much pleased with a new process that I have studied out in regard to controlling swarming—no more second swarms with me. Now that is a pretty large assertion, but my experience teaches me that it is a fact, and I think it an entirely new idea—at least I have never heard it hinted at in all of my studies of the science of bee-culture. I consider it another complete and very valuable victory of intellect over instinct. Heretofore my old colonies produced nothing but swarms—now, when I can control them, they produce honey—more, even, than the prime swarms, and the queens are the largest and finest that I ever saw. This method is as sure and true as the laws of nature, and so simple and easy that the most awkward amateur can realize its benefits.

Ezra J. Cronkleton.
Harrison Co., Iowa, July 13, 1890.

White Clover Honey.

We are at the close of a short white clover honey-flow, which was the finest ever known here for about 18 days. Of course, there has been some honey gathered outside of this time. The severe drouth cut us off entirely for the last ten days. I had only 7 colonies to start in with, and they came through the winter fairly well; yet the late spring almost starved them before I knew it, so that they were weak, and I will only secure about one case of honey to each colony. Who can beat the following?

Dr. F. J. Foster had 7 colonies; brought them all through in good condition by feeding, except one, which had "foul brood," and had to be shaken out and started anew on clean foundation. He now has 20 large and healthy colonies, has taken 126 pounds of white clover honey in one-pound sections, and has 150 pounds ready to take off. His bees are the finest grade of Italians, showing 4 bands, and many 5, of the brightest yellow, except the one that had foul brood, which are blacks.

We hope for a fall honey-flow, and if frost will keep off until October, the white aster alone will furnish enough honey to winter our bees.

Ira Reeves.
Carmi, Ills., July 11, 1890.

Introducing Queens, etc.

One sends a good round sum to a reliable queen-breeder for a choice queen, and when she arrives he wants to know how to introduce her safely. There are many ways given, but I have yet to find a safer or easier way than the one I practice, which I will give as briefly as possible:

Cut a piece of wire-screen 3x5 inches; to form it, wind it around a stick 6 inches long by $\frac{3}{4}$-inch wide by $\frac{3}{8}$-inch thick. Close one end by bending the wire over the end of the stick, and the cage is ready. Now, with cage and smoker, proceed to the hive you wish to contain your new queen. Capture the old queen, put her into the cage, and hang her between two frames in the same hive. Do all this in the morning, let her remain there all day, and at dusk remove her from the cage, put the new queen in her place, plug the lower end of the cage with honey in the comb, having the plug one inch long. Hang the cage back in the hive, just as it was before, and do not disturb the swarm for two days, and all will be well. The bees do not seem to notice the change of queens.

We have had a fair flow of very nice honey, with more to follow, if the weather continues to be favorable.

C. L. Fisher.
South Deerfield, Mass., July 12, 1890.

Bees Doing Well Now.

The bees in town did not store any honey until the last week, when basswood opened. Those that are strong are doing well now, but the heavy rains in the forepart of June were very hard on my bees. I ought to have fed them, but I was taking the census, and neglected them for want of time to tend to them. Bees are doing better in the country where there are only a few colonies in a place. There are about 200 colonies in and around the town, and I think it is too many for this place. We hope for a good fall crop, as there is a heavy growth of all kinds of weeds and grasses.

Wm. Cleary.
Algona, Iowa, July 11, 1890.

The Horizontal Bee-Escape.

The bottom facts are the diagram of the escape referred to by Mr. Dibbern, on page 432, as furnishing me the idea of placing the horizontal escape within a hole in a board, and flush with both sides; had no board about it, but it was to be made of two pieces of wire-cloth, one piece tacked on each side of a wood rim the size of the hive, and $\frac{3}{8}$-inch wood strips placed between the wire-cloth V V V shaped. This we all know to be the invention of other if not wiser heads, and described long since in *Gleanings*, and used by most of us at the windows and doors to our shops and honey-houses.

When Mr. Dibbern sent me a drawing of the horizontal trap under a hole in a board, I sent him a model with an escape in a hole in a board, and he wrote me this: "I am much pleased with your escape. In so far as there are no projections, it is perhaps an improvement on mine. I admit that yours is an ingenious arrangement—something that I tried to conceive, but failed." Does this settle it?

Jno. S. Reese.
Winchester, Ky., July 14, 1890.

Experience in Ordering Queens.

The great rush in the bee-business this season exceeds anything known in the past. Dealers in supplies have been greatly in arrears; this is not their fault. They ex-expected a good sale of supplies, but the exceeding demand went far above their expectations. I believe that we can truthfully say that dealers in bee-keeper's supplies are always anxious to fill orders promptly. It is to their future interest to do so.

Some of our best queen-breeders have been unable to fill the demand for queens.

Early in the spring, I sent an order to Luther Gray, of Florida, for a tested queen. He advertised 40 queens for sale, but what was my surprise to hear that all were sold, and the breeder was "pulling up stakes" to go North. From him I received the following statement early in June:

"It looks as if it would be impossible for me to fill orders; and, what is more, I am now too short of funds to return the money!"

This man, I understand, is sickly, and needs sympathy. If he ever gets able, I hope that he will make all arrearages right.

Well, as I wanted a queen immediately, the next question with me was, "Where shall I try my luck again?" I looked over my pile of catalogues, and in A. F. Stauffer & Co's catalogue I read:

"We are now prepared to furnish Italian bees and queens in any quantity. We have two apiaries which enable us to fill all orders promptly."

I sent them an order for a tested queen, and after receiving no reply for three weeks, I wrote to Messrs. Stauffer & Co., and have just received the following:

"We returned your money in the same letter, within twelve hours of the time we received it. We cannot supply our customers with queens and bees this month."

Did the money come back ? Well, no ; it stopped somewhere short of home.

Now this kind of work gives one the blues, but there is no use in fretting or complaining about it. I have written to eight bee-men, and when I find a man who has some queens to spare, I expect to try again. I wonder, Mr. Editor, why some American does not go to Italy and rear queens by the ten thousand lot, and bring them to America each autumn ? Imported queens from Italy are good, but they cost too much. W. P. FAYLOR.

St. Bernice, Ind.

[The Rev. W. P. Faylor's experience is like quite a number of others. We have complaints concerning delayed orders sent to others besides the two mentioned. It is true that supply dealers could not keep up with orders this season, after preparing for a large trade. The burning of mills at Watertown, Wis., and Sterling, Ills., played havoc with many. One thing, however, should have been done—when orders could not be filled—the money should have been promptly returned when demanded. For not doing so there can be *no valid excuse.* Those who will not do this, should not be classed among honorable dealers.

Since the foregoing was written, we have received the following letter in regard to the same matter :

Nearly three months ago I sent to Luther W. Gray for queens, but he does not fill my order, or refund my money, though repeatedly requested to do so.

IRWIN GROVER.

Cooperstown, N. Y., July 11, 1890.

We have written several letters to each dealer referred to, and urged them to return the money, if they have not executed the orders. The former said he was "too poor" to do so. The latter replied that they were doing the best they could to fill orders, and added that they would "attend to the parties mentioned" in our letters. We hope that they have done so ere this.—ED.]

Poor Season—Transferring.

This is a poor season for bees. I have not taken a pound of honey yet from 30 colonies, but basswood will be in bloom in a few days, and then I hope to get some honey. I transferred a colony of bees for a neighbor on May 20, from a piece of a tree that he cut in the woods last August. It was a good one ; they were all ready to swarm ; had 3 queen cells sealed, and the worker-comb filled 10 Langstroth frames. In the center of the old brood-nest I found a dried skeleton of a squirrel, thickly coated with propolis. IRWIN GROVER.

Cooperstown, N. Y., July 11, 1890.

Surplus Crop Expected.

I was sick in Buffalo until June 1, when I returned here. I nor any one saw my bees from Nov. 1 to June 3. I lost 2 colonies by starvation, and I really thought that they would all starve. I did not feed them, and to-day (July 4) the hives are full of bees, with some hopes of a surplus crop now, after this refreshing rain.

Some ten days ago I met a friend who keeps bees in movable-frame hives ; he remarked that his bees wintered well ; but one was robbed, and one had no queen. He wanted to know how to get a queen into the hive. I said, take a frame of eggs not over three days old, and place it in the hive, as a test ; if they have no queen, that in all probability they would start queen-cells. To-day I visited his place, about three miles away, and we found no eggs, but the frame he put in was all sealed over. I remarked to him that he had at least learned something. He asked what. I said, examine the frames and see ; but he saw nothing out of the way, and said that that long-drawn-out cell was a queen-cell. I replied that it was impossible for them to make a queen from an egg in a drone-cell, as every cell in the frame was a drone-cell ready to hatch out ! I found an unsealed queen-cell, and gave the entire frame to the bees, and then came away. This man has kept bees for ten years.

Springville, N. Y. J. W. TEFFT.

Working on the Basswood.

Our long seige of feeding bees is over. Basswood opened on Sunday, July 6, so the bees began to work on it—they did not wait until Monday, neither have they struck for eight hours. The weather is perfect, so far, and the basswood in a mass of bloom ; so, if the bees do not prosper now, it will be because of conditions of which I am not informed. I do not think there is as much nectar in the blossoms as there are some years ; but the bees are doing fairly well.

Now, who can beat my story ? I have an Italian queen, hatched last linden harvest, that threw off a swarm on May 27 ; again June 10, 12, and 15, resolving itself into 5 colonies. Three of the colonies are now working in the sections, the fourth has the brood-chamber well advanced, and the fifth is the original home colony, which was rather depleted. I put it into a smaller hive on five frames, and it is doing finely. I was wonderfully pleased—more so than if I had had all the swarms I wanted, I dare say. That proves our early honey-flow. But during June I was obliged to feed about 1½ pounds of sugar per colony.

MRS. B. J. LIVINGSTON.

Center Chain, Minn., July 9, 1890.

Bee-Keeping in Louisiana.

My bees are doing splendidly. I have received a good amount of honey so far this season. THOS. CAREY.

New Orleans, La., July 15, 1890.

Tastes of Sweetness.

With constant hum and busy care
The bees are gathering everywhere,
From flowers in the fields and dells,
The drops of nectar for their cells.

The well-filled combs so hardly bought—
Whose honey had so long been sought—
Supplies the bees in winter's cold,
And helps to swell their keeper's "gold."

Thus toil and care are freely given
That man may have foretastes of heaven,
While here below earth's sweets he gains—
The hints of life where Pleasure reigns.

—BY BELLE.

☞ I have a number of the standard bee-books, but your "Bees and Honey" seems to have the "whole thing" in a neat and concise volume. The mechanical part is superb.—Geo. Spitler, Mosiertown, Pa.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Send us *one new* subscription, with $1.00, and we will present you with a nice, Pocket Dictionary.

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☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

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HONEY AND BEESWAX MARKET.

NEW YORK, July 7.—New Southern extracted is arriving freely, but the quality is poor, and prices are declining. We quote from 60@65 cents per gallon. New extracted orange blossom honey, 7@7½ cents. New extracted California white sage, 6@6½c. California light amber, 5¼@5½c. Beeswax, scarce and firm at 29@30c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, June 4.—Demand continues good for strictly white clover honey, and our receipts are being taken as fast as they arrive. What little stock we have, consists of buckwheat in 1 and 2-lb. sections, which is dull and slow sale. We quote: White clover 1-lbs., 12½@13½c; buckwheat, 7@9c. Beeswax very scarce at 25@26c for bright, and 23@24c for dark. S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, July 15.—The receipts of new comb honey are light, and demand equal to the receipts. One-pound white comb is selling at 14@15c. Very little demand for extracted at present. Beeswax, 25c.

CLEMONS, MASON & CO.,
(Successors to Clemons, Mason & Co.)
Cor. 4th and Walnut Sts.

CHICAGO, July 8.—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13c. A little fancy has been sold at 15c. Extracted from 6@8c. Weather is warm, but there is some demand. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6½c. Beeswax, 28@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, July 8.—No new honey in the market, and no desirable old is left. It is quoted at 10@13c. Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, July 9.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

◆

Globe Bee-Veils.—Here are two letters received—just as the forms are closing, and are about like scores of others, showing how the Globe Veils suit those who have them. Not one objection has ever yet been received:

Send me two more Globe Bee-Veils for my neighbors. I like mine very much.—J. B. DUNLAP, Rochester, Ind., July 17, 1890.

The two Globe Bee-Veils came by return mail. Thanks for promptness. I find them just as neat and clean as new (the soiling is so slight). They are indeed *sure* protection against bee-stings, mosquitoes, etc.—JOHN HAGER, JR., Arabi, La., July 16, 1890.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

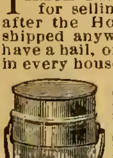
☞ The Darke County Union Bee-Keepers' Society, will hold a meeting at Greenville, Ohio, on Aug. 2, 1890. J. A. ROE, Sec.

◆

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

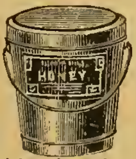
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon...holds 10 lbs....	$1.80....	$12 00
½-Gallon, holds 5 lbs....	1.50....	9.00
Quart, holds 3 lbs	1.20....	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25....	$ 1.50....	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

For Shippers and Retailers.

All boxes printed with your Business Card on front if desired.
Samples and Prices on application.

MUNSON & CO.,

30A13t New Haven, Conn.

Mention the American Bee Journal.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight: 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL

Choicest Italian QUEENS! **Purely** BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**
15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.

Mention the American Bee Journal.

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf.

Mention the American Bee Journal.

1890 ITALIAN QUEENS 1890

SIX young Queens, warranted purely-mated for $5.00. English Rabbits, $1.00 per pair. Mammoth Bronze Turkey Eggs, 25c.; 9 for $2.00. Write for Circular.
14Etf J. T. WILSON, Little Hickman, Ky.

READERS **Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.**

Eighth Edition Just Published

New and Revised Edition
—OF—

BEES AND HONEY,

OR THE
Management of the Apiary
FOR PLEASURE AND PROFIT
—BY—
THOMAS G. NEWMAN,
Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

LIBERAL DISCOUNT to dealers, by the dozen or hundred.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

☞ This new edition of our BEES AND HONEY will be given as a Premium for only **three new subscribers**, with $3.00; or clubbed with the this JOURNAL for $1.75.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin........	$ .40	....$1.00	....$ 1.75
" Untested.....	1.00	... 2.75	.... 5.00
" Tested	1.50	.... 3.75	.... 7.00
" Select Tested,	2.00	.... 6.00	.... 10.00

Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.

"PRACTICAL TURKEY RAISING"

By Fanny Field. This book tells all about turkey raising, from the setting of the eggs to the maturity of the young turks. If you follow the directions in this book you need not lose a bird. Fanny Field has had more experience and succeeds better in raising turkeys than any other person in America. She clears hundreds of dollars yearly on them, and will tell you how she does it. Price, 25 cents. Stamps taken. Address

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILLS

500 CHOICE QUEENS FOR SALE—Tested, $1.10—3 for $3.00. Untested, 70 cts. each—3 for $2.00. Also **Bee-Keepers' Supplies, &c.** Circular FREE.
26Atf JNO. NEBEL & SON, High Hill, Mo.

Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 **cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

Mention the American Bee Journal.

Yellow-Banded Carniolans!

A **NEW** Strain of Bees—Queens large and extra prolific—Bees handsome, very gentle, and great honey-gatherers. Those who are looking for a New Strain of Bees should send one dollar ($1.00) and receive one of these **Fine Queens** by return mail. Safe arrival guaranteed. Address,

HENRY ALLEY,
29A2t WENHAM, MASS.

Mention the American Bee Journal.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND

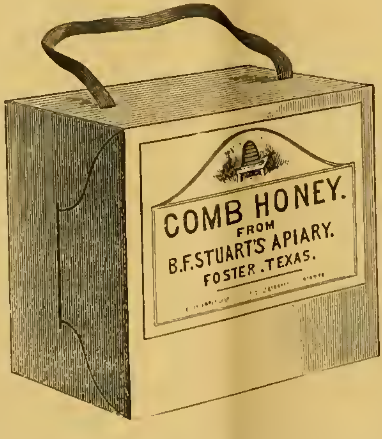
Mention the American Bee Journal.

Folding Paste-Board Box

FOR COMB HONEY.

IT HOLDS A SECTION of Comb Honey, preserving it from dust and dirt in a Store, and the "red-tape" handle makes it convenient for the purchaser to carry it home.

The label shown on the Box, is our "No. 5 Gummed Label," but any of the Gummed Labels can be put on them, by the honey-producer.

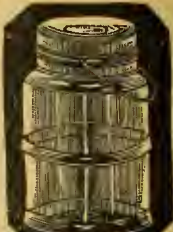

COMB HONEY.
FROM
B.F. STUART'S APIARY.
FOSTER, TEXAS.

We can furnish these Folding Boxes for one-pound Sections, 4¼x4¼, for **$1.00** per 100, or **$8.50** per 1,000, by express. The name and address of the honey-producer will be printed on 1,000 or less, for **75** cents extra.

A Job Lot of Folding Boxes, which will hold Sections 5x5 inches, or less, will be sold at **only 80 cents per 100.** ORDER EARLY to get these, as the supply is limited.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Glass Pails for Honey



THEY are made of the best quality of clear, flint glass, with a bail and a metal top and cover When filled with honey. they are very attractive in appearance. They can be used for household purposes by consumers, after the honey is removed —or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey	per dozen	.....$1.60
" 2 pounds	"	..... 2.00
" 3 "	"	..... 2.50

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Wanted, Comb Honey!

WE WANT to exchange a part of our stock of Bee-Keepers' Supplies for nice **Comb Honey** in one-pound sections. Parties having honey to dispose of, please write us the amount you have, and the price wanted. We will also pay cash for nice honey.

A. D. ELLINGWOOD, Milan, N. H.
29A2t

Mention the American Bee Journal.

BEE-SUPPLIES. Wholesale and Retail.

We furnish Everything needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send for our 40-page illustrated Catalogue—free to all. Address,

E. Kretchmer, Red Oak, Iowa.
5A9t—14E9t

Mention the American Bee Journal.

The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Samples, 5c., and money returned if they are not extra nice. Untested Queens, $1.00; six for $5.00, Tested (at least 3 bands), $3.00; Selected, tested (4 bands) $4; Breeding Queens (4 to 5 bands.) $7.00. Virgin Queens, 50 cents; 5 for $2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**

Mention the American Bee Journal.

Ah, There! One Untested Italian Queen, 75c., 3 for $2.00; Tested, $1.50. One Untested Carniolan Queen, $1.00, 3 for $2.50; Tested, $2.00. Bees by the pound and Nucleus. Send for Price-List. Reference—First National Bank. H. G. FRAME, North Manchester, Ind.
22Etf

Mention the American Bee Journal.

ITALIAN QUEENS From June 10 to Oct. 1.

Why You Should Purchase of Wood!

HE has had many years' experience. His Queen-Cells are built in full colonies. He uses no Lamp-Nursery. He is located where there are no black bees, and where foul brood never existed. Fully 95 per cent. of his Queens prove purely-mated. He fills orders promptly. His old customers nearly all purchase of him. He warrants every Queen equal to those of any first-class breeder in America in every respect. Price, 75 cents each; one dozen, $8.00. Address,
22Etf **J. F. WOOD,** North Prescott, Mass.

CARNIOLAN QUEENS & BEES bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Patten's Mills, Wash. Co., N. Y. 10Etf

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Aug. 2, 1890. No. 31.

EDITORIAL BUZZINGS.

The Rush is now all over, and here, at least, all orders for goods are filled. We hope the *experience* of the past few months will not soon be forgotten by those who have had to wait for necessary supplies, which should have been ordered and in the apiary ready for use three or four months ago. Those who delay ordering such until they are needed for use, have had some experience that should be valuable to them. We have now resumed our usual promptness in filling orders.

◆

Bees as Weather Prophets.—A new use may possibly be found for bees. Not only are they treasurers of golden liquid sweets, but it appears that they may be recognized as weather harbingers—but how far into the mysterious and almost impenetrable future the little bee may be able to look, is doubtless a question in the opinion of many. An exchange says this on the subject:

> A nice observer by looking at the bees in the early morning during the working season, will soon be able to form an opinion as to what the day will be, and that almost to a certainty, for they will sometimes appear sluggish and inactive, although the morning is very bright, and showing every appearance of a clear day, but the sun soon becomes clouded, and rain follows; and, again, the morning may be dull and cloudy, and sometimes rain may be falling, still the bees will be observed going out in considerable numbers, and as sure as this is seen, the day becomes bright and fair.

Thus are bees the objects of ever-increasing interest to all who will study their wonderful ways and works.

◆

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

Statistics.—It will be remembered that two years ago we printed considerable correspondence between several apiarists and Mr. J. R. Dodge, Government Statistician at Washington. Mr. Dodge promised to gather statistics and have them published in the Governmental Reports if we could get volunteers to report regularly. These were called for and obtained, and we sent the list of names and addresses to Mr. Dodge. After waiting about 20 months for some results, we wrote to that gentleman, and here is his reply:

> U. S. DEPARTMENT OF AGRICULTURE,
> Division of Statistics,
> WASHINGTON, D. C., July 19, 1890.
>
> Thomas G. Newman, Chicago, Ills.,
>
> *Dear Sir:*—I am in receipt of your favor of the 17th inst., recalling to my memory our correspondence of 1888–89, relative to the collection and publication of statistics of honey and bee-keeping.
>
> You will recollect that I stated that such data could only be obtained from special correspondents actively engaged in the industry, and that I must depend upon those desirous of getting such data for a list of reporters. Through your efforts, and through my own, by all channels at my command, I was able *only* to obtain a list of a little more than 200 names of persons sufficiently interested to make regular reports. From data obtained from this number, I prepared a very brief and general article upon the condition of the industry, but I do not feel justified in presenting any statistics for record based upon such a small number of returns.
>
> I was anxious then, and now, to present in our montly reports as much miscellaneous data as possible, upon special and minor agricultural industries, but it is necessary that those interested should give us their active co-operation. This, bee-keepers as a whole, failed to do, and you will readily agree with me that it is far better to present no statistics than to present those which might not be wholly correct. Two hundred names average less than one for every ten counties in the United States. Very respectfully,
>
> J. R. DODGE, *Statistician.*

Since these names of correspondents were sent to Mr. Dodge, Mr. A. I. Root, of Medina, O., has organized such a bureau of statistics, and the United States Honey-Producers' Exchange (G. H. Knickerbocker, of Pine Plains, N. Y., Secretary,) are in the same line of business. We can well afford to let them have full charge of the matter. The former is published to the world as soon as gathered; the latter is *private*, and only intended for members.

◆

Going Away.—Mr. C. Weckesser, of Marshallville, O., presents a rare opportunity for some apiarist to get a nice business location and home. He says:

> Owing to a very excellent business opening at another place, I wish to dispose of my apiary and queen-rearing business here. I have about eight acres of land, house and other buildings, and an apiary of about 100 colonies; fruit, berries, and some nursery stock in ground. To make a quick sale, I will sell at $1,700, queen-rearing plant included. The location is very fine, and it is *a bargain.*—CHRISTIAN WECKESSER

African Bees on the Rampage.—Lieut. von Tridemann, of the German Expedition in Africa, relates an interesting incident, which has been translated from the Leipzig *Bienen-Zeitung* for July, 1890, by the Rev. S. Roese. It was written by that officer in a letter to the German Colonial *Gazette*, published at Witta. Africa. It reads thus:

> On regulating matters after a wearisome journey to give man and beast the position of rest and comfort, I intended to retire for a few brief moments to myself. When all of a sudden a terrible confusion and noise came to my notice. The animals were bellowing and running in wild confusion in all directions, except one goat which was tied up and could not escape. A swarm of bees had taken possession of the camp, driving everything before it.
>
> The poor goat was completely covered with infuriated bees. At first she uttered a most pitiful noise, when at last she bent her head down, seemingly resigned to her fate.
>
> Doctor Peters advised the shooting of the poor animal to relieve her suffering. Lieut. von Tiedemann, however, desirous of saving the animal's life, crept up and cut the rope, but not without receiving two severe stings, which caused him most terrible pain. He pulled the goat near the camp-fire, and in the evening she accepted her usual rations. One of the asses, however, died from the effects of the stings.

◆

☞ An article on "Double-Walled *vs.* Single-Walled Hives for Winter," was written for the AMERICAN BEE JOURNAL by Dr. G. L. Tinker, and published on page 73 of the issue for Feb. 1, 1890. That article was afterwards copied bodily by the *Michigan Farmer*, but neither credited to the BEE JOURNAL nor to the author. Then a periodical "down East" copied it and innocently and honestly credited it to the *Michigan Farmer*. This is but a sample of the *stealing* which is continually going on by some of the agricultural papers. There are many honorable exceptions, however, whose editors would scorn to copy an article without giving proper credit.

◆

The Detroit Fair and Exposition will open on Aug. 26 and close Sept. 5. The Apiarian Department is expected to be very attractive. The award of premiums is to begin on Wednesday, Aug. 27. The editor of the AMERICAN BEE JOURNAL intends to be present and serve as judge, and hopes to meet many apiarists there.

◆

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send them.

GLEAMS OF NEWS.

The Work of a Tornado.—Here is another description of the destructive work of the Tornado mentioned last week on page 500:

> The terrible tornado that passed over this section of the country on the evening of July 12, brought death and destruction to this city. All factories are shut down, business houses are closed and draped in crepe; on the firemen's houses and other places flags are placed at half mast, and a great cloud of grief hangs over the whole city. The loss of property receives but little thought, but the terrible catastrophe on Lake Pepin is the cause of the gloom. The steamer "Sea Wing" capsized by the gale, on Lake Pepin, about 14 miles below this city, just off Maiden Rock Point.
>
> The steamer was carrying a large excursion party, of which over 100 were drowned, nearly all of them being from Red Wing. Lake Pepin in the widest place is 3 miles, and 25 miles long, and is known to be one of the most treacherous bodies of water in the Northwest.
>
> Mr. Allen Adams, a highly-esteemed and well-to-do farmer, whose friends are all who know him, and who served his country long and well during the Rebellion, and has been one of our most successful bee-keepers for over 30 years, had the sad misfortune to lose his three oldest children in the "Sea Wing" disaster, being one son and two daughters. A number of large families were almost entirely lost, only one or two being left to mourn the loss of the rest—in fact, this is a time never to be forgotten by Red Wing people.
>
> Bees suffered very little, as far as I can learn. I had but one hive blown over, as they were so well sheltered. Only one tree blew down in my apiary, and that fell in the aisle, and did no harm. Very many of the bees in this section will do very little this season in the way of storing surplus, but by feeding I have been able to keep my colonies strong, and now most of them are storing surplus from linden bloom, which is very heavy, indeed.
>
> So far as I can learn nearly all the drones were killed off in this section of country from June 10 to June 20. I have had but two new swarms, and but little signs of any for some time to come, as the bees are rearing drones very slowly, and working very strong. The country is full of bloom now, and I am in hopes it will continue. Then should we get a fall crop, we may do fairly well with our bees yet; but we had so much cold and wet weather during the spring, that bees have not been able to even make a living, and spring dwindling has simply been terrible. Robbing also has been a very great annoyance to bee-keepers here the past spring, and those having the most bees are bothered the worst. Quite a good many new swarms are going to the woods, on account of the bees swarming so little, and not watched so closely. G. N. BENHAM.
>
> Red Wing, Minn., July 14, 1890.

If you Want a treat in hot weather that those who have been accustomed to it think superior to ice-cream, get some freshly clabbered whole milk, and fill a soup-plate with it, then pour extracted honey over the surface, and grate a little nutmeg over it, and, if you can, add a little rich sweet cream, and then—please send for us.—*American Dairyman.*

Southern California.—The *Rural Californian* of last month contained the following item relative to Redlands, Calif., as a country for bees:

> The report comes to us pretty straight that one man near Redlands captured over 100 runaway swarms of bees. Any smart man ought to be able to start an apiary in that nick of woods, and getting such an early start in the season he ought to make money enough to start a bank. We knew that Redlands was a good place to live in, but had no idea that so many bees had found it out.

That is where our neighbors, Mr. Horace Sloan and family went. They were lovers of honey, and the "attraction" there is no doubt accounted for by the above item.

Southern California beats the world for bees and honey-production, as will be seen from the following item, also gleaned from the same paper as the above:

> There has been more natural swarming of bees in Southern California during the month of May than any season since 1876, and some of the swarms were monsters, too big to talk about; well, as large as a boy, so to speak!

If you measure the boy by his own estimation of himself, Bro. Wilson, the swarms are giants, "so to speak!"

Bumble-Bees.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following good advice about not disturbing the nests of bumble-bees because of the value to the crops of these large bees:

> Farmers, do not burn up all the nests of the bumble-bees, for they are worth $20 to you in fertilizing red clover blossoms, thereby insuring a heavy crop of seeds. In Australia there are no bumble-bees of our kind, and they could not raise clover seed there until they imported some. That fertilization by insects is necessary for the development of seeds, is shown in that showy flower, "bleeding-heart" (*Dicentra spectabilis*), which produces no seed, for its fertilizing moth has never been imported from North China, its native habitat.

Honey-Vinegar.—We are frequently asked as to the proper way to make honey-vinegar out of what might easily be wasted in any well-conducted apiary, and even from the poorer grades of honey, which are not usually in demand. In the following paragraphs the desired information may be found, which seems to have been written by one who knows:

> One pound of honey and one gallon of water are the proper proportions to make a good vinegar. That is, 29 pounds of honey will make (water enough being added to fill a regular 32-gallon barrel) one barrel of the best vinegar. The vessels used to make it in are common alcohol barrels which are found at drug-stores. Saw out one of the barrel-heads, and paint the outside, to prevent the iron-hoops from being destroyed by the vinegar. The barrels and vinegar are kept in the cellar, so covered with burlap as to keep the dust out and let the air in.
>
> One year converts this water and honey into the choicest vinegar. More age will make it sharper, but at one year old it is fine enough for any use. Sweetened water from washing honey drippings is the most common waste of the apiary, and to utilize it is presumed to be the desirable matter in connection with honey-vinegar. Still, with the low price of honey, bee-keepers may find a reasonable outlet for some of their poor honey, such as is unfit to sell as a luxury for table use.

The Pleasure of having the necessary supplies at hand, ready for use, is smilingly described in the following letter. Now the rush is over, and we can moralize over the matter, and see the "funny" side. The correspondent says:

> I have been feeling good over that lot of sections I got last fall; and I felt just like sitting down and having a good laugh at the situation, while you was in your "big muddle." I tell you, it makes one feel good to know that he is all ready for any emergency, and has everything fitted up and at hand. But the laugh is over on the other side of the face after all. The clover has only barely sustained the bees, and this is now the fourth season since we have seen an ounce of clover honey. What very little has been stored is from figwort and ball willow. The latter, by the way, is not a bad honey-plant, and is a very sure crop. The honey is very white, and I think pretty good quality also. The time of bloom follows up the clover closely, while the appearance of the honey is so near like it that they will do to work together for comb honey; the willow is a shade lighter than clover. The increase, so far, is from 57 to 93 colonies. Only the Carniolan bees have stored any surplus comb honey, but I have extracted a little from some of the rest; though not more than from 100 to 125 pounds. W. M. WOODWARD.
>
> Bonfield, Ills., July 24, 1890.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Bees, Flowers and Love.

Do I love her ?
Does the earth love the sun
That it feeds upon ?
Does the moon love the earth
In its circling girth ?
Do the stars love the sky
As they pale and die ?
Does the field love the rain
On its parched grain ?
Does the fish love the sea
Where its life must be ?
Does the dove love its mate
As it coos elate ?
Do the bees love the flowers
They cling to in bowers ?
Does the babe love the breast
By its liplets pressed ?
Does a man love his soul
In his dying dole ?
Does the mouth love the kiss
In its breath of bliss ?
Does young love love its dream
Of a love supreme ?
More than all these loves stir
Do I love her !
—WILLARD FISKE.

QUERIES and REPLIES.

Uncapped Honey Absorbing Poison from Bees' Breath.

Written for the American Bee Journal

QUERY 720.—Why does uncapped honey in the comb take up poison from the bees' breath, when candy or flattened sugar will not while being melted, as I suppose, by the breath of the bees ?—Mich.

Does it ?—C. C. MILLER.

I do not think it does.—A. J. COOK.

I cannot tell you. I am not posted in that matter.—JAMES HEDDON.

I think that you assume what is not true. —R. L. TAYLOR.

That's a "stunner." Ask James Heddon.—J. M. HAMBAUGH.

Do you not believe you have a wrong idea of this matter ?—H. D. CUTTING.

It does not. Your conclusion is based upon false premises.—J. P. H. BROWN.

Who did imagine that the breath of bees poisons the uncapped honey ?—DADANT & SON.

It is unwise to attempt to account for a thing that may have no existence.—M. MAHIN.

I do not believe that it does so at all.—C. H. DIBBERN.

Prove that it does before you ask the question "why ?"—MRS. L. HARRISON.

I do not think that uncapped honey takes off poison from the bees. Imagination sometimes goes a long ways.—G. L. TINKER.

Are you sure that a bee's breath contains poison ? It breathes the same air that we do. That the breath of the bee poisons honey is something new to me.—G. M. DOOLITTLE.

I did not know that honey does "take up poison from the bees' breath." This, if true, is strange ; and strange, if true.—J. M. SHUCK.

I was not aware that "the bees' breath" was poison enough to affect the honey ; and "flattened sugar" is, to me, a new commodity. Is "Mich." giving us "taffy ?" —A. B. MASON.

Does "uncapped honey take up poison from the bees' breath ?" I do not believe it. If the poison is in bees' breath as well as in the posterior anatomy, it is a surprise to me.—EUGENE SECOR.

I do not understand the above question. In fact, I do not know anything about the idea attempted to be conveyed. I did not know that bees' breath was poisonous ; neither do I believe that it is.—J. E. POND.

I do not know that it is "so." Honey gets its formic acid from the affluvium thrown off in the natural way from the bodies of the bees, but I do not regard formic acid, imparted in this way, "poison in honey." When you open a hive, you can smell formic acid ; of course the liquid honey will absorb a little of it, which I think is a wise provision in nature.—G. W. DEMAREE.

This question is but a senseless jargon of words—conveying no intelligent idea, and having no foundation in fact, experience or truth ! From beginning to end, it is but a supposition—a "vain imagination"—nothing more !—THE EDITOR.

Extreme Age when Queens have Been Known to Mate.

Written for the American Bee Journal

QUERY 721.—1. How old was the oldest queen when mated, that you have ever known of ? 2. Is six weeks too old for queens to be mated ?—New York.

I have no experience.—EUGENE SECOR.

1. Thirty days. 2. Ordinarily, yes.—J. M. SHUCK.

1. I have no record. 2. I think so.—MRS. L. HARRISON.

1. About 21 days. 2. Yes.—R. L. TAYLOR.

Please ask me this question later.—H. D. CUTTING.

1. We did not notice it. 2. We think that six weeks is too much.—DADANT & SON.

I do not know anything about this. Ask the queen-rearers.—C. H. DIBBERN.

I cannot give exact figures, but if a queen did not lay at six weeks old, I would smash her at three weeks old.—C. C. MILLER.

1. About ten days. 2. I believe it is. I have had non-fertile queens laying at less than three weeks old.—A. B. MASON.

1. I have known them to mate and become good queens 12 days after coming from the cell. 2. I should fear a delay even of two weeks.—A. J. COOK.

1. I think that early in the spring I have had queens mated that were three weeks old. 2. I should have no hope of the mating of a queen so old as that.—M. MAHIN.

1. I am not sure on this point. 2. I doubt if a queen deprived of her nuptial flight over two weeks, can be relied upon.—J. M. HAMBAUGH.

1. Thirty days old. She did not prove very prolific. 2. Six weeks may not be too old for them to mate, but I think that they would be worthless.—G. L. TINKER.

1. Well, I cannot say, but from 20 years of close observation I have found that queens, if mated after 17 days old, are of no account. 2. Yes. The exceptions would be anomalous.—J. P. H. BROWN.

1. I do not know. 2. As a rule, most surely ; still it is barely possible. I should myself, however, consider it time thrown away to wait for the chance of mating with such a queen.—J. E. POND.

1. Twenty days. 2. Such a queen would not be worth keeping, if she should mate at that age. Queens usually mate when from 5 to 7 days old.—G. M. DOOLITTLE.

1. I do not remember of ever having a queen fertilized after her age had much exceeded the ordinary time. I may have, and forgotten it. 2. Yes, a good deal too old.—JAMES HEDDON.

1. Eighteen days, and she proved a failure. 2. Yes, in my opinion, and I have observed and experimented in this line no little. A queen is not worth much if not mated by the time she is 10 days old. Nature is wonderful in her provisions. I have had queens mated in the late autumn, that did lay eggs until the following spring. Perhaps they laid a little at the start, but their eggs were neglected by the workers. —G. W. DEMAREE.

Foul Brood.—A correspondent asks us to describe this disease in the BEE JOURNAL, and to tell how to detect its first appearance :

What is erroneously called foul brood is a disease which attacks not only the brood (sealed and unsealed), but also the full-grown bees, and even the queen is sometimes affected by it. It is usually said that "you will always find the cells sunken, and a small hole the size of a pin head in the centre of the comb looking brown and bad ;" that the "foul stench arising from the diseased colony" will indicate the disease, but there are so many different shades and kinds of the disease that these are not the only indications. Sometimes brood, which to all outward appearance is sound and healthy, upon closer inspection will reveal the disease which has not yet attained the condition of sickening stench which is found in brood thoroughly ropy and rotten. When it has reached the latter condition, the only remedy we advise is to utterly consume bees, hives, combs and honey.

In the milder forms of the disease, pure phenol is no doubt the best remedy. But as it is difficult to obtain the pure article except at the large wholesale dealers, it can be obtained at the office of the AMERICAN BEE JOURNAL. One drop to 500 drops of the syrup ss the formula recommended by Mr. Cheshire, as will be seen by the following from his pamphlet :

"I found that 1-200 (that is one part of pure phenol to 200 parts of syrup) was refused by the bees altogether ; that 1-400 might be given constantly to a sound colony without appearing to limit the queen in breeding, or *touch her health* ; that 1-750 dispatched foul brood quickly, even while honey was coming in ; and that 1-500 appeared enough when it was not. I have established these quantities as the correct ones." Moderate quantities are, therefore, not injurious.

"Bees and Honey" is the title of one of the very best books on bees. The present edition is largely re-written, and is fully up to the times. It is profusely illustrated.—*Farm, Field and Stockman.*

CORRESPONDENCE.

FOUL BROOD.

Origin of this Dread Malady Among Bees.

Written for the American Bee Journal
BY C. J. ROBINSON.

While reading Prof. Cook's "Bulletin" on page 350, I felt constrained to record exceptions to some of his teaching—hence I review points contained therein. He discusses "fungoid in general." It is not possible to even open such a discussion understandingly in the limits of a weekly periodical, nor can a full review come within such limited space. The Professor records his conclusions, based on theories alone; at least, he failed to support his doctrine by evidence or plausible reasoning.

Concerning fungoid, Prof. Cook would fain have the laity apprised that "science has unveiled the mysteries of the tiny destroyers (bacteria), and revealed the sword that lays them low!" Were such the fact, we should rejoice over our deliverance from the thraldom of fungoid. Notwithstanding he proclaims that a sword is revealed that lays fungoid low, the records show that the bills of mortality from fungoid diseases have not been reduced in numbers—such diseases as Prof. Cook declares is the result of fungoid. He tells his readers this:

> Foul brood, like the Asiatic cholera, tuberculosis, swine-plague, etc., is the result of the growth and development in the animal tissues of myriads of very minute microscopic plants (called fungoid), which are called micro-organisms, or microbes. The disease (which ?), like consumption, Asiatic cholera, swine and chicken cholera, etc., which result from the presence in the tissues of such organisms, are called "fungoid," as the organisms that produce them are fungi, which reproduce by division or fission.

Perhaps all bee-keepers do not understand fully the term—"tissue." All living bodies are made up of tissues—there is no organ which has not this peculiarity. The *bones*, as well as the flesh and fat, are composed of tissues, and all alike are made up of cells.

A variety of tissues enter into the composition of an animal structure. All living bodies throughout are pervaded by animalcules—spores or minute seeds, and, perchance, they are vivified by some abnormal condition that fosters hatching into microbes, symptoms of disease are present, but it is not known that spores have anything to do with the origin of such diseases as Prof. Cook named, leaving out foul brood, which is *not a disease*—no more so than cases of poisoning, or the fermenting of "cider and sweet liquids." A fetus, while growing in the womb, may die—have occasionally died—yet the mother have no symptoms of disease. So with foul brood—the organic composition of bee-brood is radically different, in a chemical sense, from imago bees. Hence the poison—putrid fermentation—cannot act on matured organism while life exists. The moment life is extinct, the spores in the tissues begin to ply their *role*—hatch into microbes and multiply with astonishing rapidity, providing a warm temperature is present. All bodies will retain form and never change even after death, except for bacteria.

Whenever lesion of tissue occurs, food is generated for micro-organisms, and then the spores hatch into the forms that grow, multiply and feed on the diseased tissue. In cases of consumption, the tissue substance of some part of the lungs becomes ulcerated from some cause yet unknown, but usually preceded by symptoms of weakened vitality—symptoms which cannot be ascribed to germs.

Some years ago a microscopist discovered bacteria in the lungs of one who died with consumption. Straightway the finding was hailed to be the "unveiling" of a hitherto unfathomable mystery, but as yet no noise has been heard, as would be in the event a "sword" had been "revealed" that defends people from such diseases as Prof. Cook named; and since that discovery, the disciples of Prof. Cook's doctrine—I do not name him the father—claim that bacteria, in some form, directly and independently originate diseases.

With all due respect for Prof. Cook as an eminent scientist pertaining to the special branches that he is qualified to teach, I beg leave to question some of the doctrine which he advocated. I suppose Prof. Cook lays no claim to the profession of Pathologist, yet his Bulletin smacks of pathology, norology, and etiology—especially the latter. If Prof. C. is really competent to teach these sciences, it is very strange that he groups epidemic with endemic diseases, and includes non-contagious diseases into one and the same class, even including foul brood. It is not, as Prof. C. well knows, admitted by a majority of medical scientists, that consumption is the "result" of spores or microbes, nor is it admitted that the disease is contagious or transferable, except by inoculation.

Long ago Pasteur claimed that micro-organisms were the germ of splenic fever, and of late some refer the origin of epidemic diseases to the presence of germs. The recent researches of the eminent French biologists—M. M. Apostoli and Laquerriere—will prove to be a great medical discovery, perhaps (?). They claim that the antiseptic and destructive effects of a constant galvanic current on disease-producing germs and microbes, is adapted to the treatment of maladies in which no drug can kill or remove the parasite. Perhaps electrogalvanism is the "sword" that lays them low.

If Prof. Cook can unveil the "mysteries" and reveal a sword that lays them low, he would be crowned the peer of William Harvey, who, in 1628, discovered the circulation of the blood; and the former would have a niche in history on a plane with the latter.

It is no "mystery" of the time nor of late, but it is a well known fact that animate organisms are universally diffused over every part of the globe. Organic beings are found in the interior of the earth. Excavations, sunken deep shafts have revealed their forms, likewise, the smallest fossil organisms from subterranean strata many fathoms deep. Not only do lakes and inland seas abound with life, but, also, from unknown depths, in volcanic districts, arise thermal springs which contain living insects. Indeed, the atmosphere is charged with "tiny" spores. Were we endowed with a microscopic eye, we might see myriads of ethereal voyagers "on dress parade," wafted by on the breeze, as we now behold drifting clouds of aqueous vapor. Prof. Cook mentions:

> The forms that live on live animals and tissues, just as truly produce decomposition, disorganize the tissues, and this disease may be death. Such are the microbes that produce cholera, consumption (!) and diphtheria among people, and foul brood among bees.

Mark, he has it that the same forms—same form of bacteria—that live *on* live animals and tissues (even the skin is tissues) produce each of the named diseases. If his assertions are correct, one form of germs do all the harm, and they are ever present—"live *on* live animals and tissues." Prof. Cook fails to inform how it is that these "forms live" dormant *on* animals and tissues, and at a time, which they keep secret, start cholera, consumption, etc. Do these forms get mad, and, if desperately mad, size up Asiatic cholera? Certainly the Asiatic "forms" go in hugely livelier than the consumption "forms." This is one of the "mysteries" that science hath not "unveiled."

Concerning Asiatic cholera, the true pathology of the disease, or group of diseases, is by no means settled by medical scientists. The pathology of this affection comprises three divisions, viz: *a*, its morbid anatomy; *b*, its bacteriology; *c*, its chemistry. A case of summer complaint in America presents symptoms on the part of the bowels, on the part of the circulation, of the respiration, the kidneys, the skin, and the nervous center, like Asiatic cholera, and practitioners find the different phases of the disease are legion.

The summer cholera in Asia is generally more acute than summer complaint here. The bowel symptoms are usually the most prominent. It does not seem rational to call a relatively mild case of summer *diarrhea*, and to call another cholera infantum, which has the same symptoms, and only the same symptoms as the former, but in a much more aggravated form.

The etiological consideration of these diseases, Prof. C. wholly ascribes to micro-organisms, but he does not offer any evidence or authority as corroborative of his naked assertion based on his fancy alone.

From what I have learned concerning these diseases, I will, without fear of contradiction, record the well known fact that it has not yet been shown that any of the forms of summer cholera are due to the action of a specific micro-organism multiplying in the blood or tissues. There certainly are bacteria in great plenty in the intestinal canal—the organisms which induce fermentations everywhere, whenever chemical elements combine in a way to favor their action. Chemical substances alone can produce all of the symptoms of cholera and other disease.

Every stool from a case of cholera or summer complaint is a fermenting mass. How do we know this? Because, in the first place, we have in the stool (or the chyme that precedes it) the materials to maintain fermentation; second, we have the micro-organisms to induce fermentation; third, we have the proper conditions of heat and moisture in the intestine to facilitate the fermentation; and, lastly, we have the results of the fermentation—the putrid products, and the sour-smelling, fatty acids.

I have thus followed Prof. Cook by way of review of his essay, which purports to be a Bulletin relating to Foul Brood. Right here I inquire, what relation do the diseases hold to foul brood? That which is known as foul brood was so named by German bee-keepers. They saw the larvæ in the colony rot, become a putrid mass, and they called it "*foul* brood;" and they saw cases somewhat unlike (different stages), and they fancied that there are two kinds—the moist and the dry. Father Langstroth in his best of any of the bee-books, treats of foul brood learnedly at the time. Since then the "mystery" has been unveiled, and swords were at hand to lay the destroyer low. I was the first who announced that foul brood was the result of bacteria (see the *Bee-Keepers' Exchange* of August, 1882). I here quote extracts from one of my communications, under date of 1882:

> As soon as life is extinct, spontaneous fermentation ensues, followed by changes of properties in the substance that formed the animate tissues arrising from new combinations of their principles. The fermenting process, called decomposing, rotting, is dependent upon certain conditions—a high temperature and moisture—sufficient moisture to act as a menstrum aids the process that develops or leads to generating the so-called foul-brood virus, which acts as a deadly poison on living tissues of the same organic matter—larvæ—but does not act on tissues of imago bees.
>
> In all cases where the fermenting process has been complete, decomposition ensues, and the sphacelus larvæ is true gangrene, every particle of which will, like leaven, take root by inoculation in healthy brood, and, like gangrene, spreads through to all the live tissues of the same organism—animate larvæ. If the fermentation of dead brood has proceeded rapidly, and reached a certain stage of change through evolution, it is putrefactive—foul brood—emitting a putredinous stench. Chilled brood may appear putrid to an inexperienced observer when the fermentation had not been such as is requisite to generate true "foul" or fermentive virus peculiar in its properties as brood virus.

Prof. Cook mentions that, "All of these (micro-organisms) cause decomposition of the material on which they work. The substances that arise in this decomposition either go to nourish the microbes, or are given off as excreta, just as we excrete carbonic acid in our life economy." Does he entertain the idea and aim to have us understand that decomposing substances afford food for microbes? Or are we taught by him that the "substances that arise" are given off as excreta—which?

He further mentions: "Thus in sweet liquids these (bacteria) cause fermentation, as when cider changes to alcohol, and then to vinegar (acid fermentation). In meat and other dead animal tissues they cause putrefaction. Rot, then, is simply the feeding of countless millions of these micro-organisms on the decaying tissue."

That last sentence is strictly correct, and foul brood is simply rot—but when did Prof. Cook learn the fact? If I correctly read the first edition of his treatise on bees, he did not "unveil" any of the "mysteries" concerning foul brood. It is less than one decade since I advanced the theory and claim that so-called foul brood is a fermentative bacteria rotting, and under certain circumstances originates spontaneously in foul brood. At the appearance of my communications they were even ridiculed. One of my essays was read in convention in 1882–83, and Mr. D. A. Jones, of Canada, remarked: "I doubt foul brood being a germ disease." Such was the opinion generally up to that time. Later on, that eminent scientist, Mr. Cheshire, of England, began his researches in scientific bee-culture, and has educated the world so that now doubts are not entertained on that point.

Prof. Cook does not broach the subject of the origin of foul brood, and, so far as I know, Mr. Cheshire ignores the subject. None of the authors of bee-books attempt to "unveil" the supposed mysteries of the origin of foul brood. Certain correspondents have mentioned that foul brood sometimes originates in colonies. They were cognizant of the fact, but they did not ascribe the factor or cause to the real source. A veteran and expert New York bee-keeper attributed the cause of foul brood originating, as it had in some of his colonies, to the brood being fed fermenting honey.

One very overweening scribe, who writes about everything of which he is uninformed, mentions this: "The origin of foul brood is in obscurity—there are two kinds—the moist and the dry; it is probable that it is imported in honey from the India Islands." The potato-bug certainly came from the Western regions—that is well known; but nobody knows that foul brood ever was imported, though perhaps it has been exported. History informs us that foul brood existed as a scourge in the palmy days of Aristotle.

The scribe alluded to, though indefatigable, has not "unveiled" one of the mysteries concerning bees or bee-keeping—yet he pompously ridiculed my essay on foul brood!

The changes that fermentation produces are mysterious and wonderful. It develops several different organic substances in passing through different stages, defined by authors as vinus, acetic and putrefactive, and the term is applied to other processes of change, as the panary fermentation or rising of bread. Vinus fermentation does not generate poison, but acetous (which follows vinus and terminates in the production of alcohol) is poisonous in the latter stage, especially so when transformed into ether and chloroform.

Besides the fermentation of vegetable substances caused by fungoid or spores, there is putrid fermentation of animal—animate tissues—the process of change beginning the instant vitality ceases to exist, even though only a small part of the whole tissues of the body be involved, as in cases of gangrene or mortification. After dissolution of the *whole* body, putrefaction begins, followed by "rot."

Knowing these facts, it is reasonable grounds for the belief—for the conclusion—that it is probable that the honey-bee larvæ are not only liable to putrid fermentation, but that larvæ, under circumstances that favor fermentative action, do proceed to poisonous rot—real virus, which, in case the poison touches live tissues of the same organic structure as that from which the poisonous matter was when alive, inoculates—as truly as small-pox virus, and the whole body or mass becomes putrid by the putrifying germs attacking all brood adjacent.

I trust that I have thus made myself understood; that is, I have aimed to explain *how* it is a fact that foul brood is liable and does occasionally originate in a colony. How do I know such to be a fact? Because I have proved the fact by experiment. My limits will not allow me to give it in detail here, but I will do so in a future issue.

Richford, N. Y.

LOCATING HIVES.

Placing the Hives so that the Bees Mark their Location.

Written for the National Stockman
BY G. M. DOOLITTLE.

It is supposed by some that when the bees are put from the cellar, each colony must occupy the exact position or stand that it did the summer and fall previous, or else many bees will be lost by going back to their former location.

All who are at all familiar with the bees, know that the young bee when it comes out of the hive for the first time marks its location by turning its head towards the hive upon taking wing, when it commences to fly in front of the hive in circles, each circle growing larger as it goes further from the hive, until it is lost from sight. In this way the exact spot of "home" is located, after which no more precaution needs to be taken by the bee, for it seems to remember ever afterward where home is. For this reason it leaves the hive at all subsequent times in a direct line of flight, never looking at the hive at all, so that if the hive is afterward carried to a new location, the bees do not seem to know it (unless carried two or more miles away), but sally forth only to return to the exact spot where they first marked their home, there to die homeless wanderers.

Now while, as a rule, this is perfectly true, no matter whether the hive is moved at night or in the day-time, yet I find that there are two exceptions, one of which is in the case of a swarm, and the other is the first flight in the spring. While the bees seem to know where their old location was, so that the swarm, or bees in the spring, can return if they desire to, still a swarm does not so desire except from the loss of the queen, nor do bees in the spring, if put out in the manner about to be described; hence in putting out, I always place the hive where I wish it to stand, thus avoiding much inconvenience and extra work.

When I get ready to put the bees from the cellar, I first light the smoker and proceed with it and a spring wheelbarrow to the cellar-door, at which place both are left, when I go in and bring out one of the colonies and place it on the barrow. As soon as this is done I puff a little smoke in at the entrance of the hive, so as to keep the bees from running out and stinging me, which they are sure to do if no precaution is taken; and of all the bees to sting, those which are suddenly awakened from a long winter nap are the worst.

Again, all such bees as get out before the hive is placed upon its stand are lost, as they mark their location where they leave the hive, and so never find it again. Also the smoking causes them to be slower about coming out, so that swarming out and confusion are avoided. As soon as the smoke is puffed into the hive, the cellar door is shut, so as not to raise the temperature, and thus arouse the bees inside, when the hive is wheeled to where it is to stand during the summer, the entrance adjusted, and the cover put on.

In putting out, they are not all taken out at once, but I put out from 10 to 15 in the morning, scattering them well over the yard, and then as many more at night, placing these last put out around among those put out in the morning, and thus all mixing is avoided. I begin putting out about 4 o'clock in the afternoon, so that the bees can get through flying before sunset; and of course it is understood that the bees are only put out on pleasant days, with the mercury at 50° or above in the shade. In this way I continue on pleasant days until all are out.

After putting out it sometimes happens (especially if the weather is very warm) that the first put out will commence to rob or carry off the stores of those put out last, which are so busy with their cleansing flight that they do not seem to notice robbers. Robbing is not always confined to such colonies, but all weak colonies, whether wintered in the cellar or otherwise, are subject to be attacked in the spring, and I know of no one thing in bee-keeping that is more vexatious to the apiarist than robbing.

While to the experienced eye robber-bees are easily distinguished, yet those just starting out in bee-keeping are often perplexed to know whether their bees are being robbed or not, as young bees at play often resemble robbers. I know of but one sure way for inexperienced persons to tell when a colony of bees is being robbed, and that is by killing two or three of the suspected bees and dissecting them, so as to expose the honey-sac. If this sac is empty there is nothing wrong, but if you find a bee leaving a hive with its sac filled with honey, rest assured that robbing is going on, for bees in a normal condition should be always conveying honey to the hive, not from it.

To prevent robbing as far as possible, close the entrance to the weakest colonies, so that but one bee can pass at a time, and allow not over two inches in length of entrance to the strongest. If robbing has actually started, close the entrance so that only one bee can enter the hive at a time, leaving it thus until evening, so as little of the honey will be carried off as possible; and after all is quiet at night, carry the robbed colony to the cellar, leaving it there for a few days, until the bees forget the place, or are engaged in getting nectar from the now opening flowers, when the colony is to be returned to its former location. After trying all plans for the stopping of robbing, I much prefer this to any other.

Borodino, N. Y.

CLOVER HONEY.

The Season and Condition of the Bees in Iowa.

Written for the American Bee Journal
BY FRANK COVERDALE.

We have just passed through the white clover honey harvest, and it has proved to be almost a failure, there being no honey from clover. Bees, as a rule, last fall, were put into winter quarters heavy in stores, and came out of the cellar in good condition, and, in fact, those wintered on the summer stands were none behind, even when not protected. Brood-rearing went on finely—better progress in this direction could not be wished for.

Soft maple was first to bloom, and bees gathered a fair amount of pollen from it. Then the variety of willow that grows along the creeks and swampy places afforded a goodly amount of pollen.

Next in rotation was the upland willow—a variety that some years ago was planted in great numbers; from this source enough honey was gathered to last until fruit-bloom, but the latter yielded scarcely enough to keep the bees in good condition. Dandelion also afforded very little nectar; raspberry did better, and helped the bees a very little, and when clover came into bloom, rain was the order of every day during the most of its bloom, though the clover seemed to be full of nectar whenever the bees could get out. The weather was so warm that vegetation was pushed right along; thus the main flow was soon over.

But I do not wish to lay all the blame to the bad weather in June. One-third of my bees had plenty of honey to keep up rapid brood-rearing from spring until now, and these same colonies produced, this season, an average of 40 pounds of comb honey, and of extracted 66 pounds. The other two-thirds of my colonies, which were in a starving condition in the latter half of May, during which time they ceased to rear much brood, thus reducing the colonies in numbers, rather than increasing the same—this indeed is half the cause of the failure, for the latter did not, on an average, store 10 pounds of surplus honey from clover. Is it not plain enough to see, that had I fed the last colonies, and kept up brood-rearing, I might have had a fair crop of clover honey, despite the poor season? Ten pounds of sugar per colony would have done the work, and if it should have made them as strong as the former, I would have 20 pounds of honey, clear, for the labor of feeding, which, in an apiary of 100 colonies, would have added $134 to the income from the bees; that is, not counting one's time or sections to hold the honey. This shows the great necessity of having rousing colonies for the honey harvest.

Welton, Iowa, June 14, 1890.

REVERSING.

The Objects of Reversing the Brood-Combs Explained.

Read at the Ohio State Convention

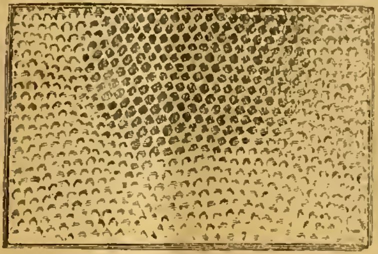
BY CHALON FOWLS.

My object in reversing the brood-combs, is to induce the bees to enter the sections more promptly, to prevent swarming by removing one of the causes of swarming, and to get the winter stores in part of the combs, instead of a little in all and not much in any.

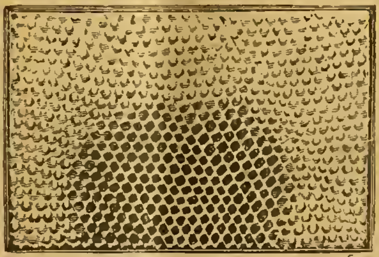
Some five or six years ago, in one of his articles, Mr. G. M. Doolittle made this assertion: "The greatest secret of getting comb honey is to get the sections just as near to the brood as possible; and any plan which allows of one or more inches of sealed honey between the sections, is certainly defective." This was not disputed at the time, and has not been since to my knowledge. Assuming, then, that this is correct, it only remains for us to discuss the best means of forcing the brood right up to the top of the brood-frames.

Now the old plan of extracting from the brood-combs, for this purpose, as everybody knows, is an entire failure. The plan of contracting the brood-chamber to 4 or 5 combs is successful, but involves the condition of having the brood-chamber narrower than the super, and also involves leaving the brood-chamber without honey at the close of the season. This is a serious objection in my locality, as we seldom get much fall honey.

Frame No. 1—Top.



Making the brood-chamber shallow, with the combs only 4 or 5 inches deep, I have tried with new swarms, and it works well; but there is still at least one objection—there is no room for winter stores. Besides, in my case, I have more than a thousand nice worker-combs in wired Langstroth frames, and I cannot afford to throw them aside; and if I produce comb honey, I must use them as brood-combs, and I must manage, in some way, to bring the brood to the top of the frames. This can be done by reversing, and still use a full set of combs.



No. 1—After Inversion.

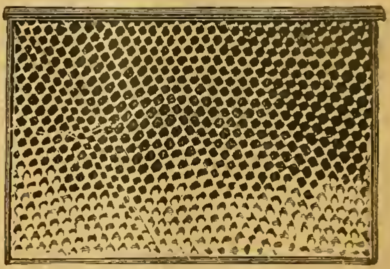
Unlike the contracting method, the size of the brood-chamber does not need to be guaged by the fertility of the queen, but the combs occupied by the queen will be solid with brood, and those which she does not occupy, will be solid with honey. To illustrate with a new swarm hived on combs or comb foundation:

In ten or twelve days the brood in the central combs will look something like engraving No. 1. If there is any capped honey above the brood in the central combs, it should be lightly mashed down with a knife or finger, and the combs reversed. The bees will, of course, remove the honey from this unnatural portion, giving the queen more room *in the same comb*, leaving the outside combs to be filled with honey.

In nine or ten days more, the central combs will be found to be solid with brood, but they need to be reversed now (see engraving No. 2), so as to throw the larvæ and eggs above, and the sealed brood below, where the bees are not inclined to store honey, and the queen will fill the combs with eggs as fast as the bees hatch, so that in nine or ten days more, the capped brood is all replaced by eggs and larvæ, when they are to be reversed again, and so on, as long as honey is coming in fast enough to crowd the queen.

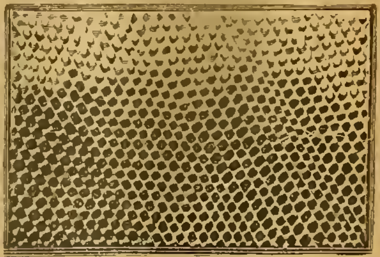
The object is to reverse often enough so as to *never let any brood hatch in the top of the frame.* This makes it impossible for the bees to store any honey there, excepting, as before mentioned, in combs at the side.

Frame No. 2—Top.



I do not advocate reversing shallow combs—say 5 or 6 inches in depth—but only claim that reversing is an important aid in securing the best results in comb honey, with the majority of frames now in use—Langstroth size or deeper.

As a preventive of swarming, reversing succeeds just where the extracting method failed, as it gives the queen more room, and the honey removed goes into the sections instead of the extracted honey. Besides, the next honey gathered must go into the sections, instead of being crammed in around the brood.



No. 2—After Inversion.

I commenced the use of reversible frames five years ago last spring, hiving 40 new swarms on them the first year, and I have gradually attached reversing corners to my old combs, so that they are nearly all reversible at present. Thus the conclusions that I have arrived at do not result from theory, but from practice.

Oberlin, Ohio.

PEACHES.

Bees and Peaches—Their True Relations.

Written for the Massachusetts Ploughman
BY GEO. A. STOCKWELL.

Fruit growers in different parts of the country declare periodically that bees destroy fruit, carry it away, and thus rob the owner.

One man relates that he found two pears on a tree that were hollow. The bees had found an opening in the broken skin of the pear, and had carried away the flesh, leaving the skin, the pear hanging from the branch, and having the appearance of perfect fruit. Other pears were partly excavated.

This may appear to be conclusive evidence against the bee—that the bee is a reckless forager, and a ruthless destroyer, but it is not conclusive evidence that the bee causes the fruit-grower much loss. Two whole pears! Two imperfect pears carried away by bees! What a calamity! Are not the bees entitled to two pears—two dozen pears—as a reward for labor that puts money in the fruit-growers' pocket? Possibly if there had been no bees, the yield of this orchard would have been less. The distribution of pollen by the bees increases the yield. This is an established fact.

But why did the bees carry off those two pears, or why did they not carry all of them away? Because the bees found the door invitingly open, out of which came a delightful odor, and also a sweet syrup trickling over the threshold. Of course they went in! All that sweetness running to waste when honey in the field was scarce! Eagerly they worked their way in, and took it all, leaving only the skin and stem of the pear. The pears thus robbed are imperfect pears, and would be of no value, except for home consumption, and perhaps would serve little for any purpose, and hence the bee as a fruit robber does not interfere very much with the prosperity of the fruit-grower.

A sound pear, plum, or peach has no more attraction for a bee than a piece of wood or stone. When the skin breaks, by which most fruit is made unfit for market, then the bee helps itself. While bees may carry away any sweet substance in liquid form rapidly, yet they can remove only a half drop at a time. Mrs. A., living near 16 colonies of bees began to make peach preserves one morning, and thoughtlessly invited the bees by throwing the peach-parings in an adjoining field. The bees came, but were not satisfied with parings when there was something better in the house. They entered through two open windows, and the picnic began.

A large milk-pan full of peaches and syrup stood on a table in the centre of the room. Mrs. A. was afraid of bees, and withdrew to another part of the house. The bees were not driven out till two o'clock in the afternoon, when the owner of the bees was found. Although many thousands of bees were in the room about three hours, they had not been able to carry away all the syrup between the peaches in the pan. Of course the bees, if they had had time, would have carried away everything except the pan and the peach-pits.

The same is true in a vineyard or an orchard. If the fruit ripe to bursting could remain indefinitely, the bees, if in sufficient force, would carry away all of it. The fruit has no attraction for bees until ripe enough for the juice to run, and not then unless the juice does run, and it will not run from sound fruit. When the fruit is ripe it is picked, and what the bees snatch in this short interval between ripening and picking, from unsound fruit, is not worth talking about.

In a vineyard where grapes are grown for wine—where broken grapes are as good as any if placed at once in the press, the bees may take a few hundred or thousand half drops, but as such broken grapes are gathered immediately, the total amount of the bees' stealings is hardly a factor, probably not equal to the amount of juice lost or wasted in going from the vine to the bottle.

Some men live on imagination and exaggeration, the latter, perphaps unintentional. In walking through a grapery, the owner seeing a dozen bees at work, exclaimed disconsolately, "The bees ruin the grapes! Not much use to raise grapes where there are bees!" Even grocers in cities complain that the bees carry off whole bunches of bananas, rob sugar barrels, and make free with a great quantity of confectionery. The grocer may lose a few half drops of syrup from his fruit displayed at the door, or from an empty molasses hogshead in his back yard. That's all—such a trifling loss that only a prodigy in mathematics could compute the pro rata cost. To the enemy of bees, a bee is as formidable and destructive as an ox in a crockery store.

A sound pear was covered with honey and placed near the apiary. The honey was removed quickly, the pear "licked" dry, but the pear remained intact. If there had been a pin-hole break in the skin, only the skin and stem of the pear would have remained. Certainly the bees for the service they render, are entitled to a few half drops of syrup running to waste from fruit that has no market value.

Providence, R. I.

EXPERIENCE.

Bee-Keeping Mysteries—The Season in Iowa.

Written for the American Bee Journal
S. C. DIERDUFF.

I have learned that there seems to be a good deal of suspense about bee-keeping, and until some one can prove himself a true prophet, there will still be some mysteries to contend with. I commenced four years ago with 2 colonies, and secured a number of the very best bee books and periodicals, and can thank those for the information that I gathered I have multiplied my little apiary to 32 colonies of bees, besides giving my daughter 3 colonies, and my sister 4. I would say to all able correspondents, that a great deal of faith and confidence is placed in their experience. I, for one, the past spring, came nearly missing it, by following their directions in this way:

We do not always know what kind of stores our bees have, and we do not know what kind of a winter we will have. Our bees became very uneasy in February, and out they had to come, because I felt that they would wear themselves out. So we placed them on the stands, and found some of them in a tolerably bad condition. All of my 26 colonies came out alive, but 2 of them afterwards swarmed out, one having no honey, and the other no queen.

I have had but 6 swarms this season. In May I put on surplus cases on all the strongest colonies, and they all went to work in them nicely. Only one of them swarmed, but for the last three weeks the hot, dry winds kept the bees from finishing the capping of their honey.

This is a changeable climate. Last year, at this time, it was our best time for honey; now the flowers are nearly all dried up, but buckwheat is commencing to bloom. Last winter the bees did better out of the cellar. I believe we should put the bees in and out of the cellar according to the severity of the winters; that is the way I did with mine, and some of my neighbors had from 4 to 24 colonies when I commenced—some of them have none now. Some lost because they left them out in the severe winters; some left them in the granary—all died last winter. Some lost because they left them in the cellar too long. I think that we must be governed by the changeable climate. The man that had 24 colonies has 42 now.

My last year's crop was a little over 500 pounds; I sold it all at 12½ cents per pound, and I could have sold that much more—all comb honey.

Yale, Iowa, July 17, 1890.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

White Honey Harvest Past.

The season for white honey is past here (Grand river valley), and I do not think, after an examination of several hundred colonies, that they have exceeded 10 pounds of comb honey per hive. The difficulty is too cold nights and not sufficient dew. We expect a fall crop, which is usually of good quality here.

Harmon Smith.

Ionia, Mich., July 17, 1890.

Bee-Keeping on Long Island.

The bees are doing well in this part of the country (mine are the only ones around). My first swarm escaped and took up its abode in a Negro meeting-house; my last also joined them. My 3 colonies built up exceedingly well, and I have hived 3 swarms from them, besides 2 escaping, and making one small swarm go back. That makes a total of 6 colonies. The white clover flow was immense here, but I did not get any surplus, on account of swarming. The golden-rod flow will soon be here, and then I expect something sweet from the hives.

The third swarm that issued from one of my hives, I made to re-enter the parent hive, first catching the queen and clipping her wing. I did this about 20 days ago, and have seen no increase in bees. Is that queen all right, or should she be superseded, and how, as I have only box-hives, which are accessible only by the flight entrance, and the entrance to the surplus chamber? The holes are round, and about one inch in diameter. What is to be done?

How is it that some people recommend Lizzie Cotton, while others run her down? The letter I forwarded from one of the men who gives his testimonial in her circular, praises her "sky high."

O. R. Hawkins.

Bellport, N. Y., July 15, 1890.

[We cannot answer the question about Mrs. Cotton. We hope she has had enough experience now to deal squarely with her customers. The many complaints heretofore registered show that she did not do so then.—Ed.]

No Surplus Honey.

There is absolutely no surplus honey in this part of Michigan as yet. Bees which have been neglected are dying of starvation. Colonies are being depopulated fast. There was no swarming.

(Rev.) Wm. Anderson.

Imlay City, Mich., July 16, 1890.

Very Small White Honey Crop.

The white honey harvest is closed here, and it will not exceed 10 pounds per colony. One hundred acres of Alsike utterly failed as a source of honey. There was plenty of bloom, but few swarms, and little honey.

B. H. Standish.

Evansville, Wis., July 19, 1890.

Hoping for a Fall Crop.

My bees are doing nothing. I have 101 colonies now from 70, spring count, and have taken only 117 pounds of comb honey. Bees are mostly in chaff hives. Everything was drying up here, but a big thunder shower and heavy rainfall last night has given us all hope for a fall crop of honey.

C. M. Burgess.

Council Bluffs, Iowa, July 19, 1890.

Poorest Season for Years.

At this season we are looking for reports of the honey crop of the country. My 200 colonies of bees have not yielded one pound of surplus honey yet. I have only about 8 or 10 swarms, and no prospect of more. It is the poorest season for many years so far. Basswood bloom is nearly over, and no honey. We hope for a crop of fall honey. Farm crops are generally good.

F. Wilcox.

Mauston, Wis., July 21, 1890.

The Nameless Bee-Disease.

Dear Editor:—Please examine the bees which I send you, and report the trouble and remedy, if any. They came from a young colony that issued on July 4, and worked finely for ten days building fine white combs in all the frames. About five days ago I noticed some bees hopping around, much like grasshoppers; they were beautiful yellow bees, but I thought they were a little swollen; they would fly, or sometimes crawl out on the alighting-board, hop around a little, and now they are in a new hive, about 6 feet from the mother hive, and the same distance from a sister swarm that issued the third day after. There is nothing wrong with them.

Now if there is any danger of contagion, I will at once destroy them; they are from a fine strain of Italians, which I got last spring. They are as fine a race of bees as I ever saw. I enclose a few taken a little before death.

H. P. Jones.

Renovo, Pa.

By request, Prof. A. J. Cook examined the bees, and reports as follows concerning them:

This is what is called the "nameless bee-disease." Cheshire says it is caused by a bacillus, which he calls Bacillus Gatoni. I find evidence of bacilli in all the bees. What is very curious, all the bees have a thin honey-stomach, stomach and intestines perfectly full of granulated honey or sugar, while there is no sign of pollen-grains. It is very rare to find such a condition at this season. The remedy is to change the queens. I would put a new queen in this colony, and the other queen, if I prized her, I would put in another colony, just to try her. Then if she did no better, kill her.—A. J. Cook.

Only One-Fourth of a Crop.

The honey crop will not be over one-fourth in this section this season. At this date the white honey must be all gathered. Where is the honey to come from if wet weather spoiled it? Must not the price be much higher than last season?

A. A. Harrison.

McLain, Pa., July 22, 1890.

Chloroforming Bees.

My 12 colonies of bees are doing fairly well in the Langstroth hives. I have 13 colonies in box-hives, which have stored no surplus honey at all, and would like to get rid of them. I do not know of any way but to kill them in the fall, which I really hate to do, and were I able to attend to them, I would transfer them. Could I smother them with chloroform, so they would not come to life again? Would it injure the honey?

D. A. Montague.

Buckingham, Ills., July 19, 1890.

[The bees may very easily be killed by chloroform without injuring the honey in the least, as it evaporates very speedily.—Ed.]

Light Crop of White Honey.

The white honey harvest is very light in this locality this season.

T. S. Bull.

Valparaiso, Ind., July 19, 1890.

No Honey in Cedar Valley.

Our bees wintered well, had plenty of honey, bred up finely, and at the first of June gave promise of a crop of honey; but, alas, for expectations—the clover and basswood have gone by, and the bees will have to be fed, or starve, this winter; there is no honey in the Cedar valley.

Thos. Tracy.

Nashua, Iowa, July 19, 1890.

Too Dry Weather for Bees.

The bees did fairly well for two or three weeks, then it turned dry, and now it is just awfully dry. The late swarms will surely die if it does not rain soon. We had as fine a start in white clover as any one could wish to see, but, alas, it all dried up.

H. Mansperger.

Lewiston, Mo., July 19, 1890.

Filling the Sections Rapidly.

The bees are filling the surplus sections at a very rapid rate. The white clover is plentiful, and the farmers have sowed lots of buckwheat, so I look for a large honey-flow. My bees did their first swarming on June 25. Good weather favored us about June 16, and still continues. When it rained it was in the night, and the bees have lost no time. H. C. FARNUM.
Aristotle, N. Y., July 18, 1890.

No Large Honey Crop.

The honey flow seems somewhat limited. There will not be a big crop this year. My bees swarmed not to exceed one-fifth, and new swarms will not store much surplus.
A. Y. BALDWIN.
De Kalb, Ills., July 21, 1890.

Small Crop of Honey.

The honey crop is not going to be as large as I expected, and, as far as I can see, it is so all over the county, on account of very bad weather the forepart of June, and a few days of extremely hot weather.
C. SCHLIESMAYER.
Pasadena, Calif., July 16, 1890.

Dead Brood.

My bees are in a very poor condition. The dead brood in the combs is of a yellowish and darker color. When they dry down at the bottom of the cells, the bees carry them out; but some do not dry down to the bottom—they make a thin scale about half way down. Occasionally there is one that is a little stringy. The disease would sometimes disappear, and in a few weeks it would re-appear. Will some one tell me what is wrong with them?
OTTO F. SEMKE.
Harrison, Kans., July 23, 1890.

[If it were the so-called foul brood fully developed, the offensive stench accompanying it would be unmistakable, and the cappings would be sunken, and have a small hole in them. Phenol is the most reliable remedy for the early stages of foul brood. When it is fully developed, fire is the only thing to be recommended for the whole outfit—hives, frames, bees and all.—ED.]

No Honey in White Clover.

The honey season is over in this locality (Western Pennsylvania), and, like many others, I have to say that it was a failure. About one-fourth of a crop of honey has been secured by those who managed their bees fairly well, and those who are not so well versed in bee-literature, much less, and some none at all; that is, so far as I have heard, and I have made some inquiry. This all took place amidst a sea of white clover, too. I never saw so much white clover before in my life. The fields were white in every direction, and yet no surplus honey! I assign two causes for the failure—first, there was no bloom until white clover came, and consequently the bees made no preparation to swarm until then, and it took place in the midst of the clover bloom; and, second, there was no honey in the last part of the clover bloom. We never knew it to fail to secrete honey before in this locality. I am selling my honey at 20 cents per pound. I have tested the bee-escape, and found it a success. I have invented one with a single bee space and cones, that works just as well, and, I think, better. I consider the bee-escape a very good invention. OSMAN M'CARTY.
Washington Co., Pa., July 21, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, July 7.—New Southern extracted is arriving freely, but the quality is poor, and prices are declining. We quote from 60@65 cents per gallon. New extracted orange blossom honey, 7@7½ cents. New extracted California white sage, 6@6½c. California light amber, 5¼@5½c. Beeswax, scarce and firm at 29@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 15.—The receipts of new comb honey are light, and demand equal to the receipts. One-pound white comb is selling at 14@15c. Very little demand for extracted at present. Beeswax, 25c.
CLEMONS, MASON & CO.,
(Successors to Clemons, Cloon & Co.)
Cor. 4th and Walnut Sts.

CHICAGO, July 8.—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13c. A little fancy has been sold at 15c. Extracted from 6@8c. Weather is warm, but there is some demand. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6½c. Beeswax, 28@30c.
A. V. BISHOP, 142 W. Water St.

DETROIT, July 8.—No new honey in the market, and no desirable old is left. It is quoted at 10@13c. Extracted, 7@8c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.
HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, July 23.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.
BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

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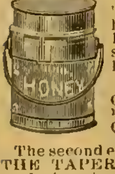

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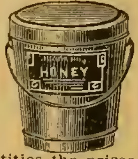

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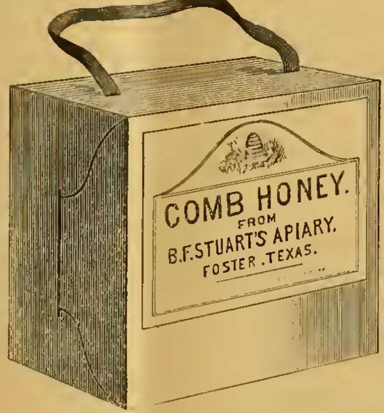
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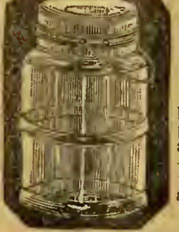

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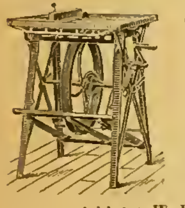

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THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

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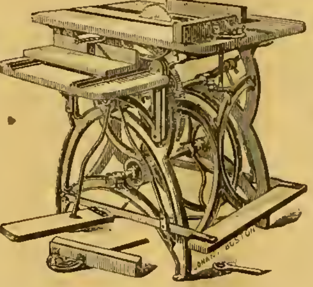

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FOR TRUE-BLOOD CARNIOLANS

SEE our Advertisement in July 5th Number of this Paper—page 462.

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Tool Box and Recording Desk, Combined.

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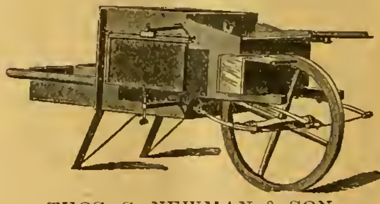

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CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI Aug. 9, 1890. No. 32.

EDITORIAL BUZZINGS.

Reports from western Kansas state that the hot winds of the last few days have so burned up the corn that some fields will not yield a single ear. We do not know how that may be, but the "hot wave" has ruined the honey crop in places too numerous to mention.

◆

☞ We have received a copy of the memorial ceremonies at the funeral of Mr Hiram Chapman, at Versailles, N. Y. It contains ten superbly printed pages, and a cover, and is well worth preserving by his many friends. The address of the Hon. Norman M. Allen, of Dayton, N. Y., at the grave, is an eloquent tribute to the memory of the deceased.

◆

You can Tell the day and about the hour when to expect the swarms, and can tell about eight days previous to their swarming by the construction of queen-cells. If cells are just started you can, if nothing happens, look for the swarm in eight days. If the cells are full size, and being sealed over, the swarm is due, and if the weather is fair, they will likely issue. —*Exchange.*

◆

Ants in the Apiary are very annoying, and hence we are frequently requested to give some method by which they may be exterminated. The following from the *Scientific American* seems to be highly recommended :

> Buy one-half pound or more of corrosive sublimate, powder it very fine, and strew the same sparingly on the ground, also in the crevices, nests, and trails of the ants, and I guarantee the ants will leave your lawn and premises as quick as they have come. Corrosive sublimate is a deadly poison, and should be handled with care.

More Lies about Comb Honey. —The following letter and item will show what is still going the rounds of the press :

> KINGSTON, Ont., July 29, 1890.
> I send you an item cut from the *Amateur Sportsman*, published at 6 College Place, New York. Is there *no way* to stop such lies being published ? C. H. CORBETT.

Here is the item referred to in the above letter :

> Artificial honey, which is more common in the market than customers know, is made of potato starch and oil of vitriol. Some rash optimists think that they are sure of getting the genuine product of bees and flowers by purchasing honey in the comb. They do not know that the exquisite white comb that pleases them is often made of paraffine wax.—*Herald of Health.*

Impatiently, Mr. Corbett asks, "Is there no way to stop such *lies* from being published ?" That is *the* question ! At present we see no way to stop publishers from giving their readers such "potions" of lies if they desire to do so. They are after the *sensation* that will bring in the dollar, and continually do they publish what they certainly ought to know is nothing but fabrication—all because it pays to do so !

An "Amateur" may be excused, but the "Sportsman" is surely "making sport" of the matter, or should know better than to publish such bare-faced falsehoods. The idea of artificial honey being made of "potato starch and oil of vitriol," and the combs of "paraffine !" A nice mess, truly !

Just think of it—this infamous death-dealing compound is credited to the *Herald of Health !*

All this is but a *distorted* re-statement of the Wiley *lie*, which the author allowed to be repeated for seven years without one word from him to counteract its baneful influence, when he knew that it was a falsehood from beginning to end, without the slightest foundation to rest upon !

His silence gave *color* to the story, and allowed others to paint it *red*, and flaunt it in the face of the world ! The greatest lie of the age has been told and retold in every land under the sun ; and it has been told so often that thousands now believe it !

In vain is it that the Professor, in sheer desperation, admitted its untruthfulness some two years ago ! He allowed it to run until the scandal-mongers got hold of it, and now he is powerless to prevent them from "rolling it under their tongues as a sweet morsel," and ever and anon repeating it to the wonder and amazement of the unsophisticated.

They spice it with "potato starch" and "oil of vitriol," "just for the fun" of seeing those not posted "swallow it at one gulp," and bung their eyes out with wonder and amazement ! This age has a wonderful development for scandal !

The people like to be humbugged—and they are accommodated very readily !

How dull it would have been without Prof. Wiley and his magnificent comb honey "lie !"

The Order of the Honey-Bee.—This order was established in the year 1703, by Louise of Sceaux, Duchess of Maine. The medal of the Order consisted of gold 14 grains and 63 centigrams, and has the image of the founder of the order, with the inscription L. R. D. S. G. D. P. D. L. O. D. L. M. A. M. ; Louise of Sceaux as continuous head of the Order, on one side, and on the other a returning bee to her hive, with the inscription, *Picola si ma fa gravile ferite, i. e.,* "Small, but able to strike deep wounds ;" representing the small stature of the Duchess.

The oath which the members of the Order were to take, was as follows : "I swear by the honey of Mount Hymettus, to be true and faithful to the founder of this Order, and to wear the medal during my natural life ; and should I ever break my oath, then may the honey be turned into gall, wax into tallow, the honey-flower into thistle, and bees and hornets may destroy my life with their stings."—*Translated from the German by Rev. S. Roese.*

◆

Mr. G. W. Demaree, of Christiansburg, Ky., has this to say in a communication dated Aug. 2, 1890, concerning his honey crop, and in reference to an error made by the printer in his reply to Query 721, on page 517 :

> "I have secured over an average crop of honey from white clover. Owing to irregular weather, the yield of comb honey has not been in the usual proportion to the clear article. I was taken with Sciatic rheumatism right in the best of the honey-flow, and lost heavily for want of skilled help. I am still suffering severely with Sciatic pains.
>
> In my answer to Query No. 721, the third line from the bottom, the word "not" is omitted ; the reading should be—"did *not* lay eggs until the following spring, etc.

◆

A Tea-Spoonful of warm honey taken every 15, 20 or 30 minutes, has a surprising effect on catarrh. Every family should have some pure honey in the house in order at once, after catching cold, to be able to use it.

◆

Frank Coverdale's article, published on page 520, was written on July 14. He dated it **June,** by mistake. This correction is make because it states that the honey harvest for white clover was over, etc. Such a remark will "fit" better in July than in June.

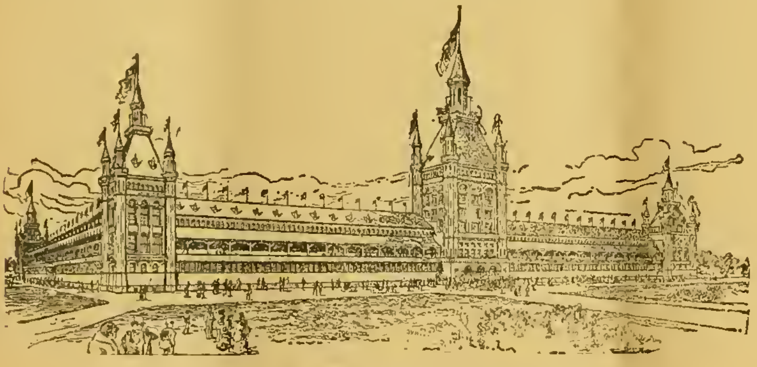
◆

The Census Illustrated sounds rather startling, but that is just what this week's "Frank Leslie's Illustrated Newspaper" does. It is the work of F. W. Hewes, whose studies have received indorsement both at home and abroad. This chart tells graphically at a glance what one could not learn from a mere array of figures in many hours. The themes of the pictures are as varied and as interesting in this issue as usual.

GLEAMS OF NEWS.

Detroit Fair and Exposition.

Among Western enterprises of large note and importance this year, in which many readers will find departments of direct interest to their business, is the Detroit International Fair and Exposition, to be held in Detroit, Mich., Aug. 26 to Sept. 5 inclusive. The grounds of this Exposition are the finest, and its buildings the largest and handsomest of any Fair or Exposition in the world. It offers the largest and most costly list of cash premiums ever given on this continent. This great Fair is continental in its scope, and embraces exhibits from all over the United States and Canada. It was the largest and most successful exhibition on this continent last year, and it promises to be still larger and better this year. The attendance last year numbered hundreds of thousands of people from all parts of the United States and Canada, and is confidently expected to be greatly increased this year.



International Fair and Exposition, Detroit, Mich.

Not only are there to be first-class exhibits from individuals and firms from all the States in the Union, and from Canada and Mexico, but the great transcontinental lines of railway from the Atlantic to the Pacific, and from Canada to the Gulf and City of Mexico, will collect and aggregate for exhibition, agricultural, mineral and other rich products along their lines, and the vast buildings and grounds of the Exposition will be crowded with a grand display of the animal, vegetable, mineral and industrial wealth and prosperity of the whole American continent. All the latest inventions and the grand triumphs of inventions and mechanics will also be profusely displayed.

There are stables for all kinds of stock, which cover acres of ground, those for each class of horses, cattle, sheep, swine, poultry, etc., being built in an immense hollow square, leaving a large open arena in the centre for exercise and display. There are water troughs, with facilities for cleaning as well as drinking, every 300 feet, and all the buildings are lighted with electricity, so that every animal or stall may be attended at night as freely as by day. The facilities for parading and displaying stock upon the grounds, as well as in the stables, are unsurpassed.

Nor will the useful only be amply provided for, for every variety of spectacle and sport, music and art, will furnish charming pleasures for the multitudes.

The best music in America will be furnished in daily and nightly concerts by Cappa's renowned Seventh Regiment New York Band, with forty eminent soloists.

The magnificent Art Hall will be filled with 300 of the choicest American and European paintings, statuary and other fine art works.

The Apiary Department should have the very finest display ever seen in America. The most noted bee-keepers of Canada and the United States are invited to compete, not only with their choicest colonies, but also with the finest honey and wax in all shapes, hives, combs, implements, and everything pertaining to the business, for which the largest cash premiums are offered.

We call special attention to the following letter from Mr. H. D. Cutting, Superintendent of the Bee and Honey Department of the Detroit Fair Exposition:

> I would like to call the attention of all bee-keepers to this fact: It being an extra poor season for honey, an extra exertion must be made to secure a good attendance of exhibitors.
>
> The Exposition Company have granted everything we have asked for—given us an extra space to show our products, the largest premium list ever offered in this country for this Department, also an expert judge with a "world-wide reputation." If we do not make a good exhibit, and fill the space allotted to us, next year the list will be reduced. They have been very liberal with us, with the expectation that we are to make a large, fine, and attractive exhibit.
>
> Now, fellow bee-keepers, do not let this be a failure, but show the people that in the face of a crop failure we can, and will, sustain the good reputation already formed, and make this a fine and attractive exhibit. If you do find it impossible to be present, and have anything pertaining to this Department that you wish placed on exhibition, you can send it by express, charges prepaid, to H. D. Cutting, Superintendent of the Bee and Honey Department, Detroit, Mich. It will be delivered to me in the building, when it will receive good care, and be placed on exhibition. Also send me instructions what to do with articles at the close of the exhibit.
>
> Mr. Hutchinson, of the *Review*, has suggested that all bee-keepers intending to visit the Exposition, meet "just after the judging" on the first week, and visit the Exposition in a body. You will be received by a committee at the bee-keepers' headquarters, and shown over the buildings and grounds, taking in all objects of interest. Please be with us as visitors, if you cannot come as exhibitors. H. D. CUTTING.

We desire to urge the bee-keepers of the surrounding country to make a creditable exhibit at Detroit. We know that it will be the more difficult because of the poor crop of honey, but there should be all the more anxiety to show what can be done even in a poor season.

Bee-Keepers' Day is to be on Friday, Aug. 29, and will be, no doubt, an interesting time for all. Let there be a general rally.

Skunks in the Apiary.—On page 380, is a query about skunks molesting bees, and there being but little experience with these unsavory animals, as to their propensity to attack bees, the following additional testimony by Annie C. Webster, in a recent issue of *Farm Life*, may interest the propounder of the question referred to, if not others engaged in the pursuit:

> Skunks are quite frequent visitors to bee-hives that are low down, and they quickly depopulate a colony. Like many other wood animals they have an insatiable thirst for honey, and in order to satisfy their cravings they will run the risk of losing their lives. In the woods they will frequently scent out a nest of bees, in the hollow trunks of trees, and make a raid upon it.
>
> It is impossible for them to get into a good stout bee-hive, and they adopt other means of satisfying their hunger. In the night time they will scratch on the outside of the hive until the bees are attracted by the noise, and emerge from the small doorway. The skunks will catch them as they come out, and eat them. They never touch the drones, or the bees that do not have honey in their sacs. Their object is to get the honey, and they eat the bees as the only way of securing the coveted sweets.
>
> These are disagreeable visitors in the spring and summer of the year, and colonies will be completely demoralized, or depopulated in a few nights if the animals are not kept away. If the hives are placed high up from the ground, no danger may be expected from skunks; but if they are situated close down to the earth it will be necessary to set traps for the animals. Nothing is better for this than the common steel trap. These traps should be set, on the first signs of skunks in the neighborhood, for a great deal of worry and damage might be saved thereby.

Quick Work.—I received the Globe Bee-Veil to day, and I am well pleased with it. I am also very much pleased with the quick delivery of goods. I received them in two days and a half after the money was sent.—Bert Viager, Moline, Ills.

QUERIES and REPLIES.

Expanding or Contracting to Get the Most Honey.

Written for the American Bee Journal

QUERY 722.—What is the best method to get the greatest amount of surplus honey—to expand or contract the brood-chamber?—New York.

If in the comb, contract. If extracted, expand.—M. MAHIN.

Expand before the honey harvest, and contract when it arrives.—G. M. DOOLITTLE.

Contraction is the popular thing, but I have some doubts.—C. C. MILLER.

For comb honey, contraction usually is the better method, and I prefer it in extracted honey also.—J. M. SHUCK.

I cannot say "what is *the* best method." I just let the brood-chamber alone, if in good condition.—H. D. CUTTING.

To expand to secure the production of the bees to gather the honey, and to contract during the honey-flow.—R. L. TAYLOR.

All depends upon the season, time, condition of the bees, and the bee-keeper. Contraction, wisely practiced is, without doubt, very helpful.—A. J. COOK.

For securing "the greatest amount" of extracted honey, have a large brood-nest so as to have lots of bees to gather the honey when the flow comes.—A. B. MASON.

To contract, of course; but you have to feed the bees, which, having decreased in numbers, are not fit for a good wintering.—DADANT & SON.

Contract, of course. Expanding would spoil "the whole business," as it would give the bees a fine chance to fill the spaces with comb at once.—J. E. POND.

When I work for comb honey, I do not want the brood-chamber too large—8 or 9 frames are sufficient; but when for extracted honey, I want it extended on the Adair plan.—J P. H. BROWN.

I expand to the capacity of the queen's fertility, in the brood chamber, and give surplus room sufficient to accommodate the surplus bees.—J. M. HAMBAUGH.

Probably by contracting the brood-chamber at the *right time*, a larger amount of comb honey can be secured; but I doubt, taking one season with another, whether it pays for the trouble.—MRS. L. HARRISON.

This is a question I have tried to solve for some time. It should have been stated if extracted or comb honey is desired, as the management is entirely different.—C. H. DIBBERN.

This matter is fully discussed in my new book, and is one of the topics of the times. In producing comb honey the proper use of the wood-zinc queen-excluder is as yet known to few bee-keepers, comparatively.—G. L. TINKER.

You do not say whether comb or extracted honey. I suppose that somewhat different methods might be employed, according to the kind you are after. I suppose, also, that different methods might be profitably employed at different seasons of the year, in working for either.—EUGENE SECOR.

I do neither. I want a standard-sized brood-chamber full of brood and honey. If I had to do either, I should "expand," as that plan will lessen the desire to swarm. I have tried contraction in several cases this season, and in every case but one the bees have swarmed in a week or ten days—I mean my swarms treated in this way have swarmed again.—G. W. DEMAREE.

Both. The brood-chamber should be at its maximum size at that time of the year when rearing bees that are to be workers right in the honey harvest; after that time, when the honey harvest is on, contraction is very valuable.—JAMES HEDDON.

The question is indefinite. When bees are being reared to gather the "surplus" as it comes, to "expand" the brood-chamber is the proper "method." When the honey-flow comes, and it is to be secured in sections, "contract" the brood-chamber, so as to compel the bees to store the surplus above it. A judicious method would therefore require both expansion and contraction.—THE EDITOR.

The Weight of Sections when Selling Honey.

Written for the American Bee Journal

QUERY 723.—Should any allowance be made for the weight of sections, when weighing and selling comb honey?—B. E. E.

No.—EUGENE SECOR.

No.—C. H. DIBBERN.

No.—H. D. CUTTING.

No.—MRS. L. HARRISON.

No.—DADANT & SON.

No, never.—JAMES HEDDON.

Not unless they are extra heavy.—M. MAHIN.

No; they should be considered a part of the package.—J. M. SHUCK.

It is not the general custom.—C. C. MILLER.

No, the sections go as honey.—R. L. TAYLOR.

That depends upon how well they are filled.—J. M. HAMBAUGH.

In our local markets here, the filled sections are sold by the piece, and not by weight.—J. P. H. BROWN.

NO; no more than for the packages you buy groceries in.—A. B. MASON.

No, not if made of the light material mostly in use.—G. L. TINKER.

It is not the rule here, and I do not think that our light basswood and poplar sections should be classed as tare when selling honey.—G. M. DOOLITTLE.

The weight of sections is a mere trifle, and in my judgment should not be allowed for, as they make a pretty and convenient case in which to carry the honey, and as such are worth more than their weight.—J. E. POND.

I think not. The section weighs very little—it is an indefinite quantity, and the price of honey is so low that I am sure we need lose no sleep if we sell with the sections thrown in. I think that no purchaser will ever speak of it.—A. J. COOK.

This is a matter for the "trade" to govern. If a person sells by the "pound," the gross should be deducted, and the honey should be sold by the pound, exclusive of the wood. In other words, if a customer orders 100 pounds of honey in "one pound sections," he is entitled to 100 pounds of honey exclusive of the boxes. But if he buys the sections at so much a piece, the deal is fair. You can easily see that if all the sections are to be called a "pound," what an inducement there is for light weights.—G. W. DEMAREE.

No; surely not. The very little weight of wood is less than ¾ of an ounce, and is as necessary to the protection of the honey while being transported by the consumer, as the paper around a package of groceries. Any one who would pick at the weight of the ordinary section on a pound of honey, must be a very *small* specimen of humanity.—THE EDITOR.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Reot's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Globe Bee-Veils.—Here are two letters received—just as the forms are closing, and are about like scores of others, showing how the Globe Veils suit those who have them. Not one objection has ever yet been received:

Send me two more Globe Bee-Veils for my neighbors. I like mine very much.—J. B. DUNLAP, Rochester, Ind., July 17, 1890.

The two Globe Bee-Veils came by return mail. Thanks for promptness. I find them just as neat and clean as new (the soiling is so slight). They are indeed *sure* protection against bee-stings, mosquitoes, etc.—JOHN HAGER, JR., Arabi, La., July 16, 1890.

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send them.

CORRESPONDENCE.

LARVAL FOOD.

A Consideration of the Food of Larval Bees.

Address at the British Bee-Keepers' Association
BY MR. THOS. WM. COWAN.

In April, 1887, I brought before your notice a work of some importance inasmuch as it was one that was about to clear up a rather difficult problem, that had caused a good deal of controversy. The work I allude to was that of Dr. A. de Planta, which gave the results of his chemical investigations into the nature of larval food. To fully appreciate the value of these researches, it would be as well if I gave you, as briefly as possible, the history connected with the subject. It has been generally the accepted idea that the food given to the larvæ was partly digested in the chyle stomach. This was the theory of Dufour, and was even mentioned by Swammerdam before.

Leuckart also held this view at first, but when the glands were discovered he thought he was not quite satisfied with the semi-digestive theory, and suggested that the larvæ were fed with a secretion from the different glands.

In the honey-bee there are four pairs of glands: two pairs in the upper part of the head, and called systems 1 and 2; one pair in the thorax called system 3; and one pair in connection with the jaws, called system 4. These glands have been described by different observers, but it was Schiemenz who, in 1883, published the most complete work on the subject. Schiemenz was a pupil of Leuckart, and was requested by him to investigate the glands of bees, especially with respect to their being the producers of brood food. The work as far as regards the description of the glands is most accurate, and shows an immense amount of energy and perseverance, for I must tell you that investigating such delicate organs as the glands of bees requires considerable patience and manipulative skill.

Although this part of the work is accurate, when he comes to treat of the functions performed by these glands he seems to have gone quite astray, and I believe it is because he started upon the work with the preconceived idea that these glands actually produced the brood food, as Leuckart had suggested. But he is not the only one, for others who have copied Schiemenz and Leuckart have fallen into the same error.

Then Leuckart discovered, in 1855, that the worker larvæ were fed with one kind of food the first three days of their existence, and stated that after that they were fed on pollen and honey, or, in other words, that they were weaned after the third day. Larvæ intended for queens were, on the other hand, provided with an abundance of the same rich food during the whole of this larval existence. Drone larvæ were supposed to be weaned in the same way as worker larvæ. This theory was to a certain extent supported by the analysis by Schlossberger of the larval food, but he having food given to him from the different cells all mixed, and supposing it to be the same throughout, analyzed it in one mass, consequently his analysis was of no practical value whatever.

On the other hand, there was another school of thought headed by Dufour. Those belonging to this school thought that the food of the larvæ was partially digested by the nurse-bees, and that these bees are the young bees in the hive. It was for a long time difficult to understand how this was done, but Schonfeld took up the matter, and from 1854 was at work at it, making investigations and experiments without number. His investigations have been described in the *Bienen-Zeitung* from the years 1854 to 1883.

From practical experiments he found that if he mixed indigestible substances in the syrup on which bees were fed, that these substances reappeared in the larval food, even within six hours, showing that this food could be nothing but chyle, and not a secretion; for if it were a secretion, as these indigestible substances were not able to pass through the walls of the stomach, they could not have appeared in a glandular secretion, and they would not have been found in the larval food. Their presence in the food confirmed Dufour's theory, and completely upset that of Leuckart and his school.

Schonfeld did more—he demonstrated how the food was ejected into the cells. The honey-stomach is a globular sac with the œsophagus at one end, and an opening to the chyle stomach at the other end. This opening has a valve called by Burmeister stomach-mouth (or *magenmund*), and Schonfeld showed that by means of this mouth the bee is able to take honey and pollen when it requires it, or when it is closed can force the honey through the œsophagus into the cells.

Below this stomach-mouth is a neck and an infolding of the upper part of the chyle stomach. This, Schiemenz supposed was a valve, but Schonfeld has shown that it has quite another use, and is actually brought into play when ejecting brood food. When honey is being forced out, the stomach-mouth is closed, and the muscular pressure on the walls of the honey-sac causes the honey to pass through the œsophagus. On the other hand, when brood food has to be ejected the stomach-mouth is open, and it is brought up to the opening of the œsophagus, so that the chyle stomach communicated directly with this, and the food passes into the œsophagus without passing through the honey-sac. In such a case the neck folding into the chyle stomach is drawn out, and the infolding takes place in the honey-stomach.

It is very natural to suppose that these investigations caused a good deal of controversy, and there remained only one thing to be done, and that was a chemical analysis of the food of the larvæ in various stages. This work was undertaken by Dr. de Planta, who was not at all satisfied with Schlossberger's analysis. He has been at work for several years in trying to settle the question, and has had considerable difficulty in carrying out his investigations. It was not an easy matter to obtain the large quantities of food he required, and keep a careful account of the food at different days of development of the larvæ.

You may form some idea of the magnitude of the work when I remind you that I stated in 1887 that he had to operate on 120 queen-cells, 4,000 drone-cells, and 10,000 worker-cells. Since then he has been carrying on his experiments, and has operated on 4,000 more worker-cells, because his results being so different to what larval food was supposed to be by Leuckart, he determined to continue his experiments. Leuckart stated that the larvæ were weaned by having pollen and honey added to their food after the third day, but Dr. Planta failed entirely to find any pollen in the food of worker larvæ, and in repeating his experiments he confirmed his previous ones in this respect.

Now his analysis shows that the different larval foods vary in the following proportions:

QUEEN.	Per cent.
Albumen	45.14
Fat	13.55
Sugar	20 39

DRONES.

	Under 4 days.	Over 4 days.	Average.
Albumen	55.91	31.67	43.79
Fat	11.90	4.74	8.32
Sugar	9.57	38.49	24.03

WORKERS.

	Under 4 days.	Over 4 days.	Average.
Albumen	53.38	27.87	40.62
Fat	8.38	3.69	6.03
Sugar	18.09	44.93	31.51

This table shows the great variation of the food, not only in the different bees, but also at different stages of their larval existence. The drone larvæ receive a considerable addition of undigested pollen in the second period, whereas the queen and worker larvæ have none but what is digested in the chyle stomach. Both drone and worker larvæ have a large addition of honey to their food in the second period, whereas the queen larva has no difference made in her food. The food is produced in the chyle stomach from honey and pollen consumed.

In a letter to me from Dr. de Planta, asking for some explanations, he says that two things must first be separated —(1) pollen as found in nature, and which is easily detected by the microscope; and (2) pollen which has been digested in the stomach, as with us meat, cheese, etc. In this last form, invisible yet present, it forms with honey the food of the queen larvæ, and that of the first period of the drone and worker larvæ. The worker larvæ get a larger proportion of albumen than even the queen, and Dr. Planta considers it is because of the small size of the cells, and the small quantity of food administered to them by the nurses necessitating a more nourishing form of food for their development. The drones are therefore weaned from the fourth day, by the addition of natural pollen in an undigested state. The worker larvæ are also weaned, but in a different manner, for instead of having undigested pollen given them they continue to be fed on digested food, with the addition of honey only.

Under the microscope at no stage of development of the queen or worker larvæ was any free pollen found, nor any skins. Dr. Planta repeated the experiment over and over again with the same result, and those who have stated that worker larvæ are weaned by having undigested pollen added to their food in the second period of their existence have erred, or have repeated Leuckart's error.

Very different is it with the drone larvæ. After the fourth day, a large amount of pollen in an undigested state was found. Prof. Kramer made several microscopical examinations, and found in one milligramme of larval food, occupying a surface of 1,440 mm. square, the immense number of 15,000 pollen-grains. Besides this it will be seen from the table that a considerable quantity of sugar in the shape of honey is added to the food. Dr. Planta considers this method of feeding the drone larvæ as a saving of time to the workers. The first four days they feed them liberally on rich food, to rapidly develop the larvæ, and then, when they are strong enough, they give them pollen and allow them to digest this themselves, and reduce the quantity of digested food they give them. It is easy to understand the saving of time to the bees by bearing in mind the large quantity of pollen found in the food.

Dr. Planta is the first who has made a separate analysis of the food on different days, and of the different bees, and he is also the first who has by his experiments corroborated Schonfeld's opinions.

It is easy to understand how former observers have gone wrong; if all the food taken from worker and drone cells over four days is mixed up, of course pollen will be found, and this misled Leuckart and those who have followed him.

These experiments of Dr. Planta show that the food of the larvæ is a digested food, and fully corroborate Schonfeld's theories—that the bees also are able, and do vary it in various proportions, whereas, if it were a secretion only, as claimed by Schiemenz, it could not vary to such an extent. I do not wish you to understand that the glands take no part in the feeding, for Schonfeld, Holz, and others, admit that secretions may be added to the food; but what I want to impress upon you is, that they do not form the actual mass of the brood food, as taught by Schiemenz and his school.

The subject may not be interesting to every one, but these experiments have a practical bearing on bee-keeping, more especially on queen-rearing. Leuckart found that the first traces of the ovaries appeared in the larva after the third day of its leaving the egg, and this is just the period at which the change of food takes place. In the larva intended for a queen, the rich food is continued abundantly to the last, and this has the effect of fully developing the ovaries. On the contrary, the change of food in the worker larva stops this development. If, therefore, we want good queens, we must see that we rear them from larvæ that have been abundantly fed on the rich nitrogenous food from the commencement of their existence.

There are other aspects of the question, but I have not the time to enter into them; I think I have said enough to make you see the value of this work. The question of brood food, I think, is now definitely settled, and we may take it for granted that it is produced in the chyle stomach, and ejected by the mechanism I have described.

The delivery of the foregoing address by Mr. Cowan, was followed by this interesting discussion of the subject under consideration:

Mr. Grimshaw said he felt sure they would all feel grateful to Mr. Cowan for his excellent address. Speaking for himself, however, he felt pained because Mr. Cowan had shaken to its foundation one of his (the speaker's) pet beliefs. He (Mr. Grimshaw) agreed that the food given to worker larvæ was a production of the chyle stomach, and was, so to speak, pumped back again, but he could not but think that the highly-charged nitrogenous material which the queen larvæ fed upon was so entirely different from the food Mr. Cowan had told them about as prepared in the chyle stomach, that it must be evolved by some separate process. There were four sets of glands, and he would ask what were the uses of them if not to provide the highly nitrogenous food the queen was fed upon? Mr. Cowan said for deglutition and assimilation, but that was not sufficient; and until a proper use for these glands was found other than the one hitherto supposed, he must cling to the old theory. At any rate, the analysis of the various foods was so startling that he was bound to give the matter serious thought, and express his opinions with great deference to the quoted authorities.

Mr. Cowan said that Schiemenz supposed all the glands to take part in the production of the brood food, although No. 1, he said, was the principal source; but Schonfeld did not hold that view. In the first place, the glands were very small in proportion to the quantity of the food—in fact, too small to be able to secrete the immense amount of food that was necessary, to say nothing about its variation in the different larvæ.

Mr. Grimshaw believed that heredity among bees was carried down by means of brood food, and it was necessary for his argument that the food given to the brood should pass through the system of the nurse-bee in order that heredity might be transmitted.

He held that the instincts, which the worker-bees had, could only be handed down from worker to worker by food passed through the system and given to the brood; that such food was a secretion of one or two special glands, but that the rich nitrogenous food was a distinct mammary secretion. The establishment of Mr. Cowan's theory would totally upset his (the speaker's) view of heredity.

Mr. Lyon understood Mr. Cowan to say that there was an absence of pollen remains in the food supplied to bees up to the third day. If so, that would support Mr. Grimshaw's theory of secretion. After the third day the secretion was discontinued, and the semi-digested chyle pumped through the œsophagus into the cells for brood nourishment.

Mr. Cowan said that in the case of the drone larvæ only was free pollen found after the third day.

Mr. Grimshaw explained the absence of pollen by stating that there was a filtering medium which prevented the husks being pumped back, the feeding valves being provided with hair, which would stop the regurgitation of the pollen.

Mr. Lyon remarked that Mr. Cheshire had been able to find out what flowers had bloomed in any particular district by making a microscopical examination of larvæ showing the remains of pollen husks.

Mr. Cowan said Mr. Cheshire had stated that in worker larvæ there was undoubtedly pollen added to the food, and that the pollen-grains were living and found in a growing condition, which was a mistake.

Mr. Meggy said his views exactly coincided with Mr. Grimshaw's, and he thought that in the present state of knowledge they might fairly accept a part of each of the theories advanced.

Mr. Cowan said that Schiemenz and Leuckart distinctly stated that the food was the produce of the glands, while Schonfeld had shown that it was possible for the bees to eject the food from the chyle stomach. The latter authority, however, did not deny that the glands contributed to the food, but he did affirm that they were not the sole producers of brood food. He (Mr. Cowan) would like to ask Mr. Grimshaw how he supposed the bees forced out the glandular secretion?

Mr. Grimshaw could not answer that, but said many extraordinary facts could not be explained. He would ask how it was that the fertile worker by simple excitation of the ovaries was able to lay drone eggs?

Mr. Lyon would like to know if heredity was controlled by food, whether there would be any difference between the eggs of a Ligurian queen when nursed by black bees, and the same eggs when nursed by Ligurian bees?

Mr. Grimshaw said no doubt there would, but of course special changes could not be traced in two generations, but might take hundreds of years to produce. Mr. Sambels had given important evidence on that point. He believed that the character of the bees (whether quiet or vicious) was governed not so much by the queen, as was generally supposed, but by the nurse-bees.

Mr. Cowan said, with regard to the salivary secretion in the human being, we would spit that out; but the bee had no power of doing the same, but could only pour out its secretion on the foods coming in, and the outlet is just in the right position for this.

Mr. Glennie and Mr. Grimshaw agreed that if a vicious colony were started in the apiary, and a succession of vicious bees followed, each colony would probably become worse and worse, and it would be better to destroy the lot and start afresh. There was no doubt that vicious bees were much more prevalent at the present time than formerly, a fact to which Mr. Lyon bore testimony.

Mr. Cowan exhibited a diagram of bee-clustering during winter, showing the variation in temperature of the cluster side by side with the variation of temperature in the open air.

On the motion of Mr. Lyon, a hearty vote of thanks was passed to Mr. Cowan for his interesting and instructive address.—*British Bee Journal.*

BEE-HOUSES.

Great Advantage to be Derived from House-Apiaries.

Read at the Colorado State Convention

BY H. KNIGHT.

Bee-houses, or more properly speaking, house-apiaries, was selected for my subject because, as many of you know, it is one of my hobbies, and a successful one.

By "bee-house" I do not mean a shed with the out-door hives put under it; neither do I mean a house in which to store honey; but a house with the hives arranged in tiers around the inside, each hive having an entrance extending through to the outside.

Eastern bee-men, on account of moths and dampness, have pronounced them a failure, until recently I notice that several are using them successfully. One man in Kansas has even taken out a patent for a bee-house. His idea is to have it lathed and plastered. I do not know whether he has the walls decorated with gilt paper, with a fancy border or not, but I do know that in my experience all that is necessary is inch boards for the walls, the hives to set back 2 or 3 inches and connected by runways. The space between the hives and wall admits of a passage of air which keeps the hives much cooler than if they were close to the outside.

Mr. A. I. Root says that smoke from the smoker is more troublesome, as it cannot pass off quite so readily, which I will have to admit, although if large openings are provided in the ends, no serious trouble need be feared.

Many bee-men say: "I want the hives close to the ground, because the bees can bring in more honey; they can fly down instead of up with their loads." I say to them: "How is it that we had the past season 11 colonies that gave us from 190 to 200 pounds each, in one-pound sections, and 10 of those hives were from 3 to 9 feet from the ground?"

Another bee-keeper says: "When the entrances are so close together (2 feet) the bees cannot locate their hives, and they also interfere in flying to and from their hives." Now, when the alighting-boards are of different colors and shapes, the bees make no mistakes by going in at their neighbors' doors. I have watched them closely many times to see if they could fly without a collision, and have come to the conclusion that they can switch off just right every time.

One of our Rocky Mountain bee-men, on going into one of our bee-houses, asked if those on the north and west did so well as those on the other sides. His grand-father was a bee-keeper, and had told him that the hives must front either south or east. To all those of such fogy notions I ask, How is it that the bees on the west side of all our bee-houses give us the most honey? But such is the fact, and I do not know why, unless it is the mountain scenery in view from their front-doors that puts extra vim and business into them.

One reason why I think the house-apiary far in advance, is that any bee-keeper can handle double the number of colonies, as we have everything almost within arm's length, and when we take off honey, which every true bee-keeper delights to do, it is not scattered all over an acre of ground, but is all close together in the bee-house.

Another very important feature is that we can, by locking the door, feel pretty certain that our hives will not leave us before our next regular visit; and too, where we have out apiaries, we do not have to bring them home to winter, and then haul them out again in the spring, as many in the East do. We can leave them on the summer stands, and under lock and key. A bee-house, too, is even better than a chaff hive, both for wintering and summering, as the atmosphere in the house, where there are a large number of colonies, is kept at a more even temperature.

It is an undisputed fact that quietness is essential during our no-honey season. A changeable temperature in the hives causes restlessness, consumption of honey, old age and death to many of the bees. An even temperature, somewhat below the freezing point, is what is wanted to cause the bees to relapse into that semi-torpid condition of successful wintering. A bee-house comes the nearest, excepting a cellar, to producing this state, and is therefore to be preferred to out-door hives.

Another advantage offered is that the bees can be handled with less danger of robbing, as the end of the house in which we want to work can be closed and the opposite end left open for light and for the bees to escape. It is also much cooler for the operator. While it is not alone for the bee-master, but for the bees also, that we want the shade, as oftentimes the out-door hives will get so hot that the bees will hang out, the combs melt down, and the bees that do not get stuck in the mess, will take their departure to find some hollow tree that is kept cool by the overhanging branches with their grateful shade.

Six years ago I built my first bee-house. That season I had two, the following season three, and so on until the past season I had five ; my smallest house holding 38 colonies, and the largest 82.

After 13 years' success with bees, nearly one-half of which I have had both out-door and in house-apiaries, so much am I in favor of the latter that for my use I shall never make or buy another hive that *must* be used out-doors, although I would add that almost any kind of a hive can be used in a bee-house.

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EXPERIMENTS.

Report of Some Experimenting by a Young Bee-Man.

Written for the American Bee Journal
BY S. P. NOLD.

This is the sixth year that I have kept bees, as I may say, for experiments.

1. I bought a colony in a box-hive for $5, and transferred them to a Mitchell hive. The experiment was a success, though I attributed it to luck, as I knew nothing at all about bees. I could not have picked out the queen had any one offered me a dozen colonies for my trouble. That colony was torn up every week that summer for my inspection. The queen became a common sight to me.

2. I divided this colony, and gave the queenless part a cell (Holy-Land), which proved to be a success. The queen mated with a hybrid drone, and made the crossest cross I ever had.

3. I tried to use comb foundation, and would find each new hope melted down or twisted out of shape. Bee-keepers are hard to discourage, however, and now I use it in full sheets, and always wire my frames—another experiment.

4. The next thing to try was introducing queens, so I began with Italians, and introduced by Heddon's, or rather his "Friend's" plan. I like it, and have never lost a queen by using it. I tried two fine Italians by the "Peet process," and lost one, but I admit that my carelessness was partly to blame. I do not like the method. Heddon's Friend's plan is better. His theory is correct—"they do not realize that they have been queenless."

5. I transferred by Heddon's plan, and will now use no other. Cutting up egg larvæ, and dripping honey is too dauby and wasteful.

6. I took a weak colony and put it on a strong colony's stand ; then I took a box and scoop-shovel, and scooped up perhaps a peck of bees that were hanging out of three hives of a neighbor's (he said I might), and mixed them with the weak colony. For a week they hung out day and night, and were too lazy to move for smoke, so I gave them a frame of eggs and larvæ, and a pint of syrup. *They have gone to work and do not hang out.* I believe that hanging out is a lazy habit. Will some one who has a good many bees, try this "scooping up" plan of strengthening weak colonies, and report ? It is very simple.

7. I fixed up an invertible brood-nest, and tried inverting, this summer. I find it a success, and believe that invertible surplus-cases would be, too, but I have not tried them. After inverting the hive of a good colony, I put on three surplus-cases with full sheets of foundation in pound and half-pound sections. For experiment, then, I did not *look* inside of that hive for exactly four weeks (in June), and when I did look, I felt puffed up, and looked that way. They did not swarm, but have stored 30 pounds of honey—a good yield here for a season.

I winter my bees without protection, more than that they are put on the south side of the building. I have never lost any. The coming winter I will try packing with straw.

These experiments were begun when I was but twenty years old, and all were performed without aid or suggestion from any one save through books and periodicals. All bee-keepers should read continually.

I have had as high as 10 colonies, but always kept them as a side-issue. Some day I will buy out a farmer's lot, and go into the business.

Let me say to young bee-keepers—it will pay you to have one colony to experiment with. If it makes you no money, it will enable you to get the knowledge necessary to work your others to the best advantage.

Coffeyville, Kans., July 21, 1890.

MARKETING.

How to Prepare Comb Honey for the Market.

Read at the Oxford, Ont., Convention
BY W. COUSE.

In attempting to prepare an article on this subject, it will be difficult to find ground that has not been gone over previously by some person ; but I feel that there are bee-keepers who do not pay nearly enough attention to this matter, and they are not only losers themselves, but the grocers they sell to and other bee-keepers are often affected. If a grocer receives a lot of poor-looking honey, he does not readily sell it ; and had he received nicely-done-up honey of good quality, he would have likely sold much more honey, and have caused a greater demand.

It is somewhat difficult to say just when or where to begin to prepare honey for market—perhaps the best time would be before we have any. To be able to have the choicest comb honey it must be built in nice, white sections, and to find what a nice white section is, we can ask different supply dealers for samples, and there will likely be some suitable samples of sections received to choose from. Another article of importance is nice, thin foundation. With this fastened in the sections, they have a neat appearance.

Now, before placing the supers as filled with the sections on the hives for the bees to fill, you would likely have nicer comb honey if you scrape all the propolis possible from the hive and fixtures, as when the bees travel over the propolis, there will be some stick to their feet and soil the cappings of the honey and sections.

Some may think the propolis of little injury, but to those they might take the following precaution, which a gentleman claimed to have taken that showed some nice honey at one of our country fairs. A gentleman showing honey in competition with him wanted to know how he got such nice white comb, "Well," he says, "if you do not tell any person, I'll tell you. I just fasten little mats at the entrance of the hives for the bees to wipe their feet on before going in." Now I do not know whether the mats were placed by the second gentleman or not, but I know that there are many that do not trouble with the mats, and there are enough, and too many, that do not scrape the propolis off.

I usually find that comb honey taken from a colony with new combs, frames and hive, is nicer looking than if taken from a colony without new combs, frame and hive. With these precautions, and if their be a good yield of bright honey, you will be apt to have something fit for market. When you have the honey nicely filled with sections, you will require nice shipping-crates to hold from 6 to 18 sections. Before putting the sections into the shipping-crates, the propolis will have to be again looked after and scraped, and it is always better to have the manilla-paper dish in the bottom to hold any leakage that there may be.

In regard to the size of section to use, I believe a section that holds a pound of honey, or as near it as possible, is the best. I know there are many bee-keepers that use a section to hold an ounce or two less than a pound, but the objection I find to this is that it is sometimes used to deceive buyers. Sometimes the grocer is deceived, and sometimes he is the deceiver. I believe the grocer often buys sections of honey for a pound, and they are short, and the bee-keeper may sell him those sections at a cent or so less than his neighbor sells his sections, but the section that costs the most may be the cheapest. I know all bee-keepers do not sell sections by the piece, and I believe it to be generally unfair to do so.

I have no doubt many bee-keepers have had grocers ask them for sections weighing an ounce or so less than a pound, as they can sell them for about the same as one that weighs a pound; but they want to buy the honey by weight from the bee-keepers, all the same, and no doubt there are bee-keepers who get sections cut so that they can sell them for a cent or so less than their neighbors, who have them weigh a pound.

My best customers are men that wish sections that weigh a pound, or as near it as possible, and they buy by the pound and sell by the pound. Are not these men deserving of confidence much more than the man who asks you for a section less than a pound to sell by the piece for a pound? I prefer to deal with the man that wishes to sell by the pound.

It would perhaps be well to give you an account of a purchase made last winter, as an example. Not having enough comb honey to supply the demand, I wrote to a gentleman that I heard of having comb honey for sale at a certain price, and I sent him an order for so many pounds of first-class honey at a certain price. Well, the honey did not come as ordered, it was not first-class, it was dark, the comb soiled, the sections not cleaned of the propolis, shipped in a grocery-box, some sections broken,and all generally daubed, and the weight short by about an ounce and a half per section, although the invoice was by the section for the amount I offered by the pound.

In closing this article, I would ask all to endeavor to have their comb honey done up as neatly as possible, and of good sample, for if done up as the above lot, you need not expect a good price for your honey, and you will demoralize the trade to a certain extent, and not only be injured yourself, but you would be the cause of injuring others; you would only be able to sell to a man once, and when you had made one sale to each of the grocers or bee-keepers in your neighborhood, you would have to look for new customers further away, or eat the honey yourself.

Streetsville, Ont.

CARNIOLANS.

Experience with these Bees for Five Years.

Written for the American Bee Journal

BY C. L. FISHER.

I think that the article on page 488, by Mr. S. A. Shuck, demands attention. He condemns the Carniolan bees without trial, which at least shows malice.

He says he purchased one select tested Carniolan queen (which it seems the bees considered almost old enough to die) from which he reared 35 queens, which he says were all mismated, making the working stock hybrids, of course. Then he tells how they behave—like the worst hybrids he ever saw, by thieving, mutilating cappings, etc.

Next he acknowledges himself behind the times, by allowing his bees to follow their natural impulses, and swarm whenever they take a notion to do so. Then he compares his hybrids with his Italians, calling the hybrids Carniolans, and he closes by guessing that he shall be a certain number of pounds of honey short, by having a streak of Carniolan blood in his apiary. "Consistency thou are a jewel"—but wanting here.

Now I have had five years' experience with the Carniolan bees, and three years of the time I have had from 50 to 100 or more colonies. I have also had Italians in the same yard during all that time, and in no instance have my best Italians in honey gathering or breeding, equaled my best Carniolans.

I procured queens of both races from breeders of note, besides rearing many.

My motive in writing this is simply to see justice done the best race of bees (and their breeders) that I have any knowledge of.

South Deerfield, Mass.

BEE-CULTURE.

Management of the Apiary so as to Make it Pay.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

The drouth was broken on July 12 by a fine rain, and the weather has been exceedingly warm since, and the bees have been working industriously on the sweet clover. Some plants yield honey only a few hours each day—awhile in the morning or during the heat of the day; but bees are now working upon sweet clover, "from early morn to dewy eve." The yield from this source is not large, but continuous, during a time when there is little or none from any other source, and is sufficient to keep up brood-rearing, thus providing for workers to gather the fall harvest.

A neighbor bee-keeper came into our apiary lately, and used Bible words out of place, denouncing bees as a delusion and a snare. Now this is very silly, for all business has its ups and downs, and those who hold on, with a grip like a bull-dog, are the ones who "get there."

Some benevolently disposed persons in the city of New York, at one time, made an investigation to ascertain the cause of poverty, and ascertained that it was not owing to the lack of ability to do many things well, but because they flitted from one thing to another. I have known farmers, who became discouraged owing to the failure of crops, and moved into towns and cities, where they were known as laborers and teamsters, and in a short time were beseiging the overseer of the poor, and the benevolent societies for assistance, and their household goods set into the streets for non-payment of rent. It is impossible for a man to support a large family by day labor, and if they had stuck to the farm, and worked it, they would have had plenty to eat, and their children would be producers instead of consumers only.

Bee-keepers, stick to your hives, and have your colonies strong, to be ready in case of a flow of honey, which may come upon us for harvesting unawares. If you sit grumbling, your dishes may all be upside down when the shower comes, and you will not get a drop. The same applies to horticulturists, gardeners, and farmers; and it would be well for all to follow the advice of Cromwell, "Trust in God, and keep your powder dry."

"Keep all colonies strong" is Oettl's "Golden Rule," and the last words to be found in "Langstroth's Revised." Whoever succeeds in doing this, acquires the title of bee-master, and will ultimately reach the goal—some sooner, others later.

A bee-master can generally tell at a glance the condition of a colony. Where a colony is working energetically, and the hive is very populous, it is good evidence that all is right within. A man once selected a colony from our apiary in early spring, choosing it because so many bees were on the outside in the portico, and afterwards requested us to exchange it, which we did. This colony was queenless, and having no "babies" to feed, were outside ready to welcome any robbers that might come along. If they had had a queen they would have had plenty of work to do in the hive and fields, and not been lounging in the porch.

Old colonies that have swarmed need looking after; many times they swarm unbeknown to their owner, and are very weak in consequence. A laying queen may be found in one corner of the hive with a few bees, and the combs full of honey and bee-bread. To let them remain in this condition during the season is very poor economy for they will pay no rent for the use of the hive and comb, and must perish the following winter.

In building up such a colony, I would let outside combs remain if they were sealed full of honey, and remove all containing no brood. I should not expect to find more than one containing brood; with a division-board I would confine them to one side of the hive, leaving room for four frames. If the season was like the present one, I would uncap a frame of the honey, and after removing a frame of brood from the centre of a strong colony, put it in its place where it would be used in rearing brood.

I would take a frame of chipping brood and brush off all the bees, for if removed with the bees they might destroy the queen. In a short time the young bees will be ready for business, and another similar one may be given them. The strong colony that parted with one frame of brood will not be injured, while the one to which they were given will be strong to gather fall honey and populous enough for winter. My motto is to make every hive pay its rent.

Where a hive contains a drone-laying queen, pinch off her head and exchange the combs in the same way, only if it is desirable to do so take combs covered with bees, being careful not to deprive a colony of its queen. In this way a hive can be filled up at once. Where there are drone-layers it is the best way to get rid of them that I know; that is, exchange their combs for those filled with brood and covered with bees. If a queen is introduced at this time, she should be caged until the old bees fly home, for they might destroy her. They will rear a queen with the material at hand, if left to themselves. If the ower desires to introduce a choice cell, and waits until they have built queen-cells, it will be respected; but if given to them before, they will tear it open and destroy the embryo queen.

Peoria, Ills.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon..Dowagiac, Mich.
Sec'y. and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Bees in a Church-Spire.

An item on page 483 calls to mind the fact that three years ago a swarm of bees entered the spire of the Congregational church at Magnolia, Iowa. They have passed three winters there, and appear to be doing well. The church stands where it is exposed to our severe storms from all directions. The spire is covered with inch lumber, which is mostly covered with tin. The cavity occupied equals ten or more ordinary hives. The large cavity does not prevent swarming, as quite a number of swarms have been secured by persons living near. P. M. Richardson.

Magnolia, Iowa, June 22, 1890.

Price of Honey—Golden-Rod.

Basswood extracted honey should bring 10 cents a pound. I am not producing any comb honey, but it ought to bring 15 and 18 cents. There is not half enough honey to supply the market, and the bee-keepers have had a hard pull to get the bees through. I have taken 55 pounds of basswood honey to the colony, spring count, and I expect to get a good yield from that splendid flower—the golden-rod. So, bee-keepers, put on the sections, and give the bees a chance. If the golden-rod honey is extracted, it should be well ripened, for the flavor is much better. Fayette Lee.

Cokato, Minn.

No White Honey to Speak of.

The basswood is gone. There is no white honey to speak of in Erie county this year. I did think that I would get a small run on basswood. I may have 200 pounds of honey from 80 splendid colonies on June 15. I had over 4,000 pounds in 1889, from a less number. A. A. Harrison.

McLane, Pa., July 25, 1890.

A School of Apiculture.

I could no more do without the American Bee Journal than I could without my bees. I find it above criticism—suited alike for all who keep bees in all parts of the world. Its excellent system and style of journalism makes it a regular "school of apiculture."

Xenia, O. C. E. Woodward.

One of the Vervains.

Will you kindly state, through the Bee Journal, the name of the flower that I send, and whether or not it yields honey? It abounds here in a wild state.

Prairie du Chien, Wis. B. E. Brown.

[It is *Verbena hastata*—one of the numerous vervains, and has long been recognized as an excellent honey-producer. —Ed.]

Bees Doing Finely.

I am delighted by the form in which my article appeared on page 489. After reading it, yesterday, I took a ride in the country, and found a "bee-tree" in the corner of a country post-office building, and another in a white oak tree; I was not looking for bees, either. Bees are yet doing finely here; I find bees doing well in what is certainly the very poorest place in the county. D. B. Wier.

Petaluma, Calif., July 22, 1890.

Some White-Red Clover.

I send you a species of white clover that I find growing among the red here, wishing to know whether it is a distinct variety, or a mere freak of nature. I notice the bees working on it and also the red clover. I never saw so many bees working on the red clover before—Italians, Carniolans and hybrids alike—about as many as on the common white. The white I send you is mixed with the red, but the bees that gather from the white pass the red by, while those that gather from the red pass the white by. They seem to divide on the "color line." Bees are not more than gathering a living now. The white clover is nearly all dried up, and the basswood gone out, and we are in the midst of a severe drouth, which I fear will kill the white clover entirely, as it did a few years ago. Unless we have a decided change for the better soon, those who were writing, "I look for a splendid honey crop," will have to sing a different song. Bee keepers are a hopeful people, but they had not better build their castles too high.

J. C. Armstrong.

Bromley, Iowa. July 21, 1890.

By request Prof. A. J. Cook answers the above question. He says:

The white red clover sent by Mr. Armstrong is not a rare freak. Dr. W. J. Beal, in his excellent work on grasses, says: "The petals vary in length, direction taken, and differ in color from a dirty white to pink and bright scarlet." I have seen red clover very dark, even crimson, and as light as much of our white clover. It blossoms earlier or later, and the tubes vary very much in length. This habit of variation enables us to select and breed new varieties. It is not improbable that by selecting heads with short flower-tubes, we might soon get a variety that bees could easily work on.—A. J. COOK.

Bees Making a Living Now.

I put 52 colonies of bees in the bee-cellar in the fall, and took out 52 in the spring—all in good condition. The bees did nicely until the middle of June, but from then on until now I have had to feed them ; but they are making their own living now. The white clover was winter killed, and linden blossoms did not amount to anything.

FRED BOTT.
Wabasha, Minn., July 28, 1890.

Poor Season for Bees.

It has been rather a poor season for bees. Some have had no swarms or honey. The spring was cold and wet up to June 15 ; some bees starved at that date. I had to feed some of mine. I have only 4 swarms so far from 28 colonies, spring count, and 400 pounds of comb honey ; but I have lots of bees now, and if the weather is favorable, I will get some from golden rod, as bees work well on it in this State.

EDGAR RICARD.
Canaan Center, N. H., July 26, 1890.

Bees are Doing Poorly.

I have 21 colonies ; they had but little honey when put out, but I fed them, as they had to live until the first of July, when I do not think there was a hive with half a pound of honey in it. The foreport of June the hives were full of bees, and ready to swarm. It was wet and cold through June, and I do not think that there are as many bees in the hives now as there was the first of June. One man here with 40 colonies paid no attention to them after putting the bees out, and he lost half of them.

C. L. LOVELAND.
Plainview, Minn., July 28, 1890.

A Diseased Colony.

There is something wrong with one colony of my bees, as so many of them are dying. They act so strangely ; they turn black, and drag one another out, three or four struggling with one bee. Being a novice in bee-culture, I do not know what is the matter. I do not keep bees for profit, but for pleasure ; but from what I gather from the BEE JOURNAL, I think that it must be foul brood. I thought at first that they were robbing, and again I thought they were old bees, but the drones dropping dead at the front of the hive dispelled that thought ; otherwise the colony seems strong.

G. W. SAPP.
Renovo, Pa., July 28, 1890.

[See our reply to Mr. Semke, on page 524 of last week's BEE JOURNAL.—ED.]

The White Clover Crop.

When spring opened, my 50 full colonies and nuclei had wintered without loss. They received quite a set back, however, by not getting any honey from the fruit-bloom. Later on, the wet weather with cool nights made the yield from white clover very light, with few swarms. As the basswood bloom is nearly gone, and no honey from this, I think that it will be safe to report less than one-fourth of a white honey crop from this section ; and this will be nearly all stored by the Italians, from what I have heard. I do not think that the blacks will average 5 pounds of white honey per colony, and no swarms. They lack the energy of the Italians, and the difference has been more marked this season than in the good ones. Buckwheat looks favorable, and we may secure something from it.

C. RUSSELL.
Conesville, N. Y., July 28, 1890.

Honey-Flow was Short.

"If it would only rain." "I won't get any corn." "My potatoes are no good." "My garden is all dried up." Such are some of the expressions heard around here just now, for we have had no rain to speak of for six weeks. We had a small shower which furnished the bees with enough work to keep them out of mischief. The honey-flow was good, but very short this season.

On July 22 we buried our little baby boy. He was only two weeks old.

ED. E. SMITH.
Carpenter, Ills., July 29, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, July 7.—New Southern extracted is arriving freely, but the quality is poor, and prices are declining. We quote from 60@65 cents per gallon. New extracted orange blossom honey, 7@7½ cents. New extracted California white sage, 6@6½c. California light amber, 5¼@5½c. Beeswax, scarce and firm at 29@30c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 15.—The receipts of new comb honey are light, and demand equal to the receipts. One-pound white comb is selling at 14@15c. Very little demand for extracted at present. Beeswax, 25c.

CLEMONS, MASON & CO.,
(Successors to Clemons, Cloon & Co.)
Cor. 4th and Walnut Sts.

CHICAGO, July 8.—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13c. A little fancy has been sold at 15c. Extracted from 6@8c. Weather is warm, but there is some demand. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6½c. Beeswax, 28@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, July 8.—No new honey in the market, and no desirable old is left. It is quoted at 10@13c. Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

BOSTON, July 23.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents ; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

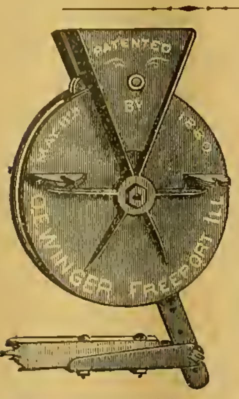
A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.

50E26t 1mly.



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IMPROVED

FEED GRINDER

is a novel and ingeniously arranged Grinding Mill, made to attach to 10 or 12 foot Pumping Wind-Mills, operated by an elbow attached to main pumping rod in such a manner that it can be attached or detached in a minute, so that you can either pump or grind, or do both at the same time. It works with a reciprocating lever, so arranged that it grinds on the up-motion of the Wind-Mill. The Grinder consists of a double-metal case and 3 burrs, two remaining stationary and one revolving in the center, producing a double-grinding surface, two-fold greater than any other known to the world, and will grind more than the ordinary farmer needs. It can be changed from grinding coarse to fine by simply turning one nut.

Price, **$20.** We will present one of these Feed Grinders to any one who will send us 75 subscribers, at $1.00 each.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

Advertisements.

American Carniolans, From two finest Home-Bred Colonies—only one swarmed this season. Very gentle, good honey-gatherers. Dry weather disposed of drones near me. Select Untested Queens, $1.00. Safe arrival guaranteed.

32A4t E. F. QUIGLEY, Unionville, Mo.

Mention the American Bee Journal.

Prices Reduced.

SELECT TESTED QUEENS, $1.25. Warranted Queens, 75 cents—6 for $4.00. Make Money Orders payable at Nicholasville, Ky.

14Etf J. T. WILSON, Little Hickman, Ky.

Mention the American Bee Journal.

☞Eighth ✢ Edition ✢ Just ✢ Published☜

New and Revised Edition

—OF—

BEES AND HONEY,

OR THE

Management of the Apiary

FOR PLEASURE AND PROFIT

—BY—

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

LIBERAL DISCOUNT to dealers, by the dozen or hundred.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

☞ This new edition of our BEES AND HONEY will be given as a Premium for only **three new subscribers,** with $3.00; or clubbed with the this JOURNAL for $1.75.

Mention the American Bee Journal.

Ah, There! One Untested Italian Queen, 75c., 3 for $2.00; Tested, $1.50. One Untested Carniolan Queen, $1.00, 3 for $2.50; Tested, $2.00. Bees by the pound and Nucleus. Send for Price-List. Reference—First National Bank. H. G. FRAME, North Manchester, Ind.

22Etf

Mention the American Bee Journal.

The Brightest 5-banded, Golden ITALIAN Bees and Queens, and the REDDEST DRONES. Very gentle; very prolific; good honey-gatherers—working on red clover—and the MOST **Beautiful** BEES in existence! Took **First Premium** at Michigan State Fair in 1889. Samples, 5c., and money returned if they are not extra nice. Untested Queens, $1.00; six for $5.00. Tested (at least 3 bands), $3.00; Selected, tested (4 bands) $4; Breeding Queens (4 to 5 bands.) $7.00. Virgin Queens, 50 cents; 5 for $2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TIMPE,
18E8t **Grand Ledge, Mich.**

Mention the American Bee Journal.

SHORT-HAND

YOU can earn **$75.00** per month as a short-hand writer. Learn at home. Address,

S. A. MORAN, Ann Arbor, Michigan,

FOR FULL PARTICULARS.

32A2t **IT WILL PAY YOU.**

Mention the American Bee Journal.

CARNIOLAN **QUEENS & BEES** bred the coming season from Imported Mothers, will be ready to send out the **1st of June.** Send for FREE Circular, to JOHN ANDREWS, Pattens Mills, Wash. Co., N. Y. 10Etf

Mention the American Bee Journal.

Choicest Italian QUEENS! **Purely** BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

15Atf E. D. KEENEY, Importer and Breeder, Arcade, N. Y.

Mention the American Bee Journal.

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf

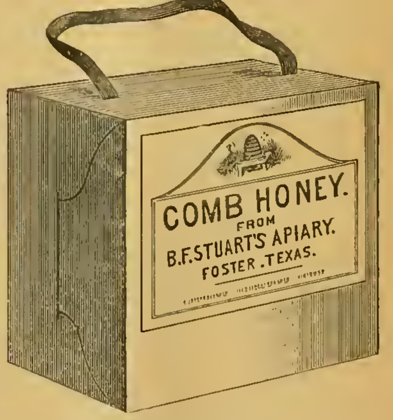
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Folding Paste-Board Box

FOR COMB HONEY.

IT HOLDS A SECTION of Comb Honey, preserving it from dust and dirt in a Store, and the "red-tape" handle makes it convenient for the purchaser to carry it home.

The label shown on the Box, is our "No. 5 Gummed Label," but any of the Gummed Labels can be put on them, by the honey-producer.


COMB HONEY.
FROM
B.F.STUART'S APIARY.
FOSTER. TEXAS.

We can furnish these Folding Boxes for one-pound Sections, 4¼x4¼, for **$1.00** per 100, or **$8.50** per 1,000, by express. The name and address of the honey-producer will be printed on 1,000 or less, for **75** cents extra.

A Job Lot of Folding Boxes, which will hold Sections 5x5 inches, or less, will be sold at **only 80 cents per 100.** ORDER EARLY to get these, as the supply is limited.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

ITALIAN QUEENS **From June 10 to Oct. 1.**

Why You Should Purchase of Wood!

HE has had many years' experience. His Queen-Cells are built in full colonies. He uses no Lamp-Nursery. He is located where there are no black bees, and where foul brood never existed. Fully 95 per cent. of his Queens prove purely-mated. He fills orders promptly. His old customers nearly all purchase of him. He warrants every Queen equal to those of any first-class breeder in America in every respect. Price, 75 cents each; one dozen, $8.00. Address,

22Etf **J. F. WOOD,** North Prescott, Mass.

Mention the American Bee Journal.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

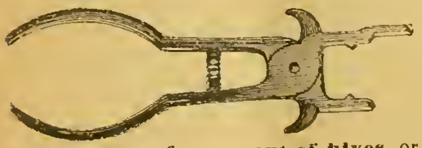
For Shippers and Retailers.

All boxes printed with your Business Card on front if desired.

Samples and Prices on application.

MUNSON & CO.,
30A13t New Haven, Conn.
Mention the American Bee Journal.

Jones' Frame Pliers.



For taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, 40 cents., by mail. By express, 30 cents.

THOS. G. NEWMAN & SON,
246 East Madison St., CHICAGO, ILL.

CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin	$ .40	$1.00	$ 1.75
" Untested	1.00	2.75	5.00
" Tested	1.50	3.75	7.00
" Select Tested,	2.00	6.00	10.00

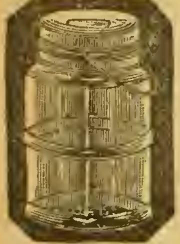
Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.
Mention the American Bee Journal.

FOR TRUE-BLOOD CARNIOLANS

SEE our Advertisement in July 5th Number of this Paper—page 462.

J. B. MASON & SONS,
31Atf MECHANIC FALLS, ME.
Mention the American Bee Journal.

Glass ÷ Pails ÷ for ÷ Honey



THEY are made of the best quality of clear, flint glass, with a bail and a metal top and cover When filled with honey. they are very attractive in appearance. They can be used for household purposes by consumers, after the honey is removed—or they can be returned to and re-filled by the apiarist.

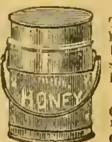
Prices are as follows:

To hold 1 pound of honey	per dozen	$1.60
" 2 pounds	" "	2.00
" 3 "	" "	2.50

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

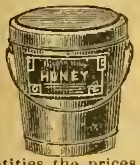
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

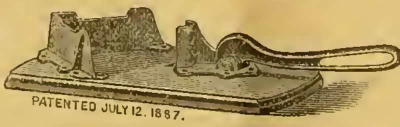
THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at 6s. 6d. per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

SECTION PRESS.



PATENTED JULY 12, 1887.

WE are now prepared to furnish Wakeman & Crocker's **PRESS for putting together One-Piece Sections**—at wholesale and retail. Price, $2.00, by express. By the dozen—rate given upon application.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf
Mention the American Bee Journal.

READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

QUEENS! QUEENS! QUEENS!

By Return Mail.

AS **FINE A LOT** as was ever reared, at the following low rates—purity and safe arrival guaranteed:

Tested, each	$1.50
Warranted, each	1.00
" per dozen	9.00
Untested, each	.75
" per dozen	8.00

Will state that these Queens are all reared from our best honey-gathering strains, in full colonies. We are one of the oldest and largest breeders in America. Give us a trial order.

Address,
W. W. CARY, - COLERAINE, MASS.
Please Mention the American Bee Journal.
31Atf

Illustrated HOME JOURNAL

An Elegant Monthly for the

FAMILY AND FIRESIDE,

At $1.00 a Year.

Printed in the highest style of the art, and profusely embellished with Magnificent and costly Engravings.

THOMAS G. NEWMAN & SON,
PUBLISHERS
CHICAGO, ILLS.

It is a moral and intellectual educator, and is invaluable in every library, as well as a very attractive and inspiring ornament in every drawing-room. Each issue contains 36 pages.

Its historical and biographical sketches, as well as its stories, are charming; its departments for the Young Folks, the Household, and the Family Circle are very interesting, and all who examine it are sure to become regular subscribers. It captivates them all.

A Sample Copy will be sent free, upon application to the publishers.

The **ILLUSTRATED HOME JOURNAL** will be clubbed with the American Bee Journal and both mailed to any address in the United States and Canada, for one year, for **$1.60.**

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEE-WAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Aug. 16, 1890. No. 33.

Mr. C. J. H. Gravenhorst, of Wilsnack, Germany, and editor of the *Bienen-Zeitung*, writes as follows on July 19, 1890:

Dear Mr. Newman:—I am always very glad when the American Bee Journal visits my home, and I read it with the same interest as in the days of the late Samuel Wagner, the founder of that good old bee-paper, and such writers as Langstroth, Gallup, Wilkin, Root, and many others who were at the head of its contributors. I think that the Bee Journal, having advanced from a monthly to a weekly, has done very much to promote bee-keeping, not only in your country, but also in others.

How glad would I be, if I could arrange to visit you at the great Columbian Exposition to be held in Chicago in 1893, and shake hands with you, as in those pleasant days when we met at the hospitable home of our friend, Thos. W. Cowan, at Horsham, England! How I would enjoy making the personal acquaintance of the American bee-keepers. Now, if I shall not have the pleasure to visit the great Exposition at Chicago, others of my bee-keeping friends in Germany and Austria will do so, as some have already told me. I know that they will be welcome.

Yours truly,
C. J. H. Gravenhorst.

We should be delighted to meet our friend Gravenhorst, as well as other European apiarists at the Columbian Exposition to be held in Chicago in 1892-93. Of course the International Bee-Convention will be held here at that time, and the apiarists of the world will have an International "love-feast" during the 400th anniversary of the discovery of America. Let there be an universal gathering—for all will be welcome. It will be a time long to be remembered by those privileged to enjoy it.

☞ Dr. S. W. Morrison will locate in Colorado Springs, Colo., about Sept. 1, and consequently he has given up the queen-rearing business in Pennsylvania, and does not intend to resume it in Colorado.

The Springfield Exposition and Sangamon Fair will be held at Springfield, Ills., on Sept. 8 to 12, 1890. Upon the request of the management, we have offered *Special Premiums*, as indicated in the following taken from page 64 of the Premium List:

The publishers of the American Bee Journal, of Chicago, offer an attractive and valuable premium for the best exhibit of Comb Honey from each township in the county, of an annual subscription of said paper. The American Bee Journal is a recognized authority in all matters pertaining to bee-keeping.

1631	Best comb honey from	Auburn.
1632	" "	Ball.
1633	" "	Buffalo Hart.
1634	" "	Capital.
1636	" "	Cartright.
1637	" "	Chatham.
1638	" "	Clear Lake.
1639	" "	Cotton Hill.
1640	" "	Cooper.
1641	" "	Curran.
1642	" "	Fancy Creek.
1643	" "	Gardner.
1644	" "	Illiopolis.
1645	" "	Island Grove.
1646	" "	Lanesville.
1647	" "	Loami.
1648	" "	Mechanicsbrg.
1649	" "	New Berlin.
1650	" "	Pawnee.
1651	" "	Rochester.
1652	" "	Salisbury.
1653	" "	Springfield.
1654	" "	Talkington.
1655	" "	Williams.
1656	" "	Woodside.

The Capital Bee-Keepers' Association will award premiums for honey, bees, apiarian supplies, etc., in sums aggregating $50 in cash. For particulars concerning the classification of prizes of the Capital Bee-Keepers' Association, address the Secretary, C. E. Yocom, of Sherman.

Special prizes for the competition of the world, are specified in the premium list of the Sangamon Fair, which can be had upon application to the Secretary, Col. Charles F. Mills, Springfield, Ills.

Foul Brood in Canada.—Bee-keepers in Canada will be interested in reading the following from the Montreal *Witness*. A man who signs himself "Bee-Keeper," asks the following questions:

> Last summer we became aware that our 6 colonies of bees were affected with foul brood. In the fall we took out most of the infected frames and put in new ones. When looked at in the spring, the colonies had about a dozen foul-broody cells in each brood-frame, and they have no more foul brood than that now. The colonies are of fair strength, rearing lots of brood, and gathering plenty of honey. 1. Do you think that that much foul brood is worth paying attention to? 2. How should we proceed to get rid of it? 3. We are spraying the brood-frames with a mixture of salicylic acid, soda and water—will it have any effect?

The Rev. W. F. Clarke answers the questions thus:

> 1. Most certainly. Foul brood, in however small quantity, is such a deadly disease, and so sure to spread, that effective measures cannot be too soon taken for its extirpation. There is now a law in force, passed by the Ontario Legislature at its last session, requiring immediate action in all cases of foul brood.
>
> 2. This question will be best answered by quoting from the Act just referred to, Sec. 10, which requires that "every bee-keeper or other person who shall be aware of the existence of foul brood either in his own apiary or elsewhere, shall immediately notify the President of the Ontario Bee-Keepers' Association of the existence of such disease, and in default of so doing shall, on summary conviction before a justice of the peace, be liable to a fine of $5 and costs.
>
> The President of the Ontario Bee-Keepers' Association is Mr. Allen Pringle, of Selby, Ont.
>
> "Bee-Keeper" should at once examine his hives, and if there is any remaining trace of foul brood, report their condition to Mr. Pringle, who is empowered to send the inspector if he considers it necessary. If there is not much appearance of the disease, and it appears to be yielding to treatment, it may not be considered a case requiring inspection.
>
> The inspector is authorized by statute either to order continuance of remedial treatment, or total destruction by fire of the affected hives, and of all tainted appurtenances. Foul brood has become so prevalent, and is so fatal in its effects, that the Ontario Bee-Keepers' Association deemed it necessary to seek Legislative interference to stamp it out. Hence the passage of the law in regard to the matter.
>
> 3. There is a great difference of opinion among bee keepers as to the efficacy of salicylic acid and other remedies for foul brood. In some cases, the treatment referred to is reported to be successful; in others it fails. Much depends on the virulence of the disease.
>
> Not a few excellent bee-keepers believe that by far the better plan when once foul disease has got a foothold in an apiary is, to cremate all the hives and tainted fixtures, and make a new start with healthy bees.

Sweaty Horses are peculiarly obnoxious to bees, and yet many will thoughtlessly expose themselves to danger by driving or stopping near hives of bees when the horses are hot. The accident at the farm of Henry Anglemiller, near Mercersburg, Pa., by which Anglemiller's daughter, Mrs. George Miller, had both of her feet cut off, was most distressing.

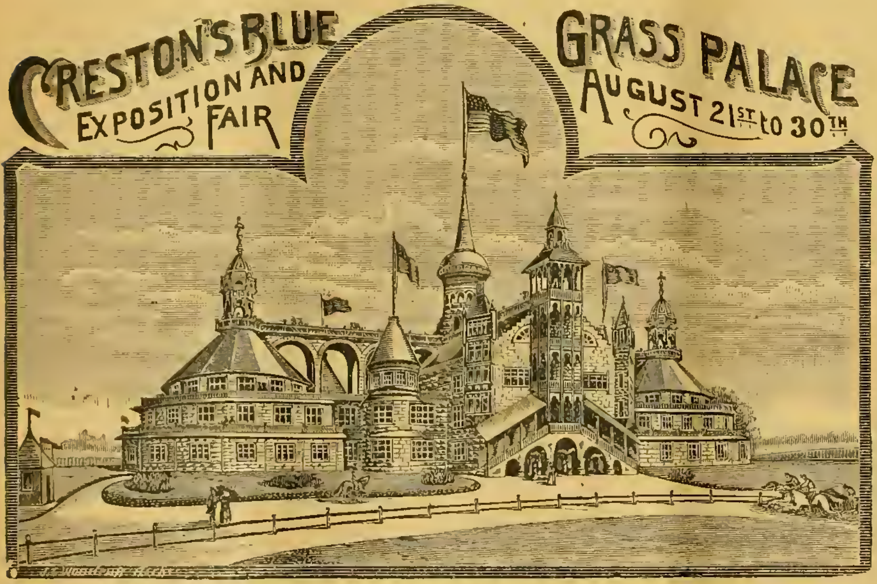
> Mr. Anglemiller was just starting to mow a field of grass which adjoined his house. In making the first cut around the field, he thoughtlessly stopped just alongside of a shed which contained more than a dozen hives of bees. The perspiration on the horses attracted the bees, and they left their hives and swarmed on the man and the horses, covering them in black masses. Mr. Anglemiller shouted for help, and his daughter came running out of the house.
>
> She threw her dress over her head to protect herself from the bees, ran right in front of the machine, and stooped down to loosen the traces from the mower, and liberate the horses. As she did so, the maddened horses sprung forward and cut both of her feet off exactly at the ankle joint. They each hung by a small piece of skin, and double amputation was made by the physicians.
>
> She rallied from the shock, and it is thought she will recover. She is about 30 years old, and has four children, the youngest only four months old.
>
> Her father is now in a very serious condition from the bees' stings. His face and arms were covered with the stings so that they had to be combed out with a fine-tooth comb. The horses will likely die.

GLEAMS OF NEWS.

Fair at Creston, Iowa.

The Creston Fair grounds, which will contain the celebrated "Blue Grass Palace," will be opened Aug. 21, by Gov. Boies, and that date will be "Governor's Day." The management expect to secure the attendance of the governors of Illinois, Minnesota, Nebraska, Kansas, and Missouri. Roger Q. Mills has been secured, and McKinley or Speaker Reed will undoubtedly be present; and it is intended to secure eminent men for each day.

The Palace building will front to the east, and will have a total length north and south of 265 feet, and will be 130 feet wide. The main tower will be in the center of the building, and will be 120 feet high, while on the north and south wings will be two towers 90 feet high, and over the main entrance on the east side there will be another tower 100 feet in heighth, which, with several smaller towers, will give the building a magnificent appearance.



A bridge will be constructed from the south tower to the north one, which will be 12 feet wide and over 200 feet long, which, together with the balconies will accommodate one thousand people. This will be a fine place for visitors to watch the races, as a splendid view can be had of the entire race-track.

The south wing of the building will be used as an auditorium, having a seating capacity of 2,500 people. The Palace will be decorated with all the different grasses and grains, baled hay and straw. The decorations will be much more elaborate than those of last year, and a much larger amount of blue grass will be used.

The Palace of 1890 will far surpass anything in the palace line ever seen in the country, not excepting the famous Corn Palace of Sioux City, and visitors who viewed the old palace with wonder and admiration, will be greatly surprised and delighted, when they view the improved Blue Grass Palace of 1890.

This is a nice opportunity for the bee-keepers of that State to make a good exhibit. It takes only one fare on all railroads in Minnesota, Wisconsin, Illinois, Indiana and Missouri. This is the time to visit the Blue Grass region of Iowa. Eighteen counties have each a booth, and vie with each other in decorating in a unique and novel manner, and the booths are filled with the products and manufactured articles from each county, and each booth will have parties in charge for the purpose of giving information to visitors in regard to the value of land, the amount of the supply of timber, coal, stone, and all other advantages, etc. Home seekers, land buyers and investors can here obtain all the information they desire without the expense of going all over the Blue Grass Region, and select any part of the region they wish to visit.

Excursion tickets are good for 15 days. This will enable parties after visiting the Palace to visit any part of the Blue Grass section they desire.

First Lessons in Apiculture.

Beginners need good advice, and we seldom see anything more suitable and timely than the following from the *Southern Cultivator* :

Obtain, at least, a general knowledge of the natural history of the honey-bee, and of its management. Become acquainted, both theoretically and practically, with the use of improved apiarian implements. This can be obtained by studying a good manual for the apiary, and bee-periodicals, in connection with experience in the apiary.

Spend some time with a practical and progressive apiarist, even if you have to pay for the privilege of "helping" him; for successful and prudent care of bees at all seasons, and under varied circumstances, and the skill necessary to obtain the most honey in the best condition for the market, can be obtained only by practical experience in the apiary. From time immemorial bees have been kept by man, but until the past few years the pursuit has not received that attention that it demands. In this, as in all other departments of business, it is only the careful and practical that succeed.

Nature has provided the health-giving delicious nectar in myriads of beautiful flowers, that deck forest, field and garden, and developed the bees to gather this abundant sweetness and store it in quantities far exceeding their wants—and man may step in to aid nature and bees, and utilize the surplus honey for his pleasure and sustenance.

Locate where there is a profusion of white clover, with timber to the west and north, within range, where fruits and flowers abound; golden-rod, asters, Spanish-needle and heart's-ease, or smart weed, abound in almost every locality, and where they do not, it is easy and profitable to put in a few acres of buckwheat for late fall honey, as there is none better for wintering bees, and extracted buckwheat honey will always find a ready sale.

In locating an apiary, avoid the close proximity of laurel thickets, as honey gathered from the laurel is unwholesome, if not really poisonous; avoid the neighborhood of cider-mills, and do not locate immediately near a large body of water, as it will confine your bee-range to one direction exclusively.

A broken or low country is no particular disparagement, because the less desirable for cultivation, the more encouragement will there be for you to take time by the forelock, and plant plentifully of such honey-plants as will insure a constant bloom, and provide against the time when others, encouraged by your success, shall also commence bee-keeping in your neighborhood, and overstock the location, unless nature is liberally assisted.

With all the above natural advantages secured, aided by your provident forethought in planting, you will have done much to settle the question as to the best method of wintering, and your bees, let them be of whatever color, will solve the problem as to which is the best race.

* * *

Globe Bee-Veils.—Here are two letters received—from two of our correspondents, and are about like scores of others, showing how the Globe Veils suit those who have them. Not one objection has ever yet been received:

Send me two more Globe Bee-Veils for my neighbors. I like mine very much.—J. B. Dunlap, Rochester, Ind., July 17, 1890.

The two Globe Bee-Veils came by return mail. Thanks for promptness. I find them just as neat and clean as new (the soiling is so slight). They are indeed *sure* protection against bee-stings, mosquitoes, etc.—John Hager, Jr., Arabi, La., July 16, 1890.

* * *

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50, if all are sent at one time.

QUERIES & REPLIES.

Best Method of Preventing the Swarming of Bees.

Written for the American Bee Journal

Query 724.—What is the best method to prevent swarming—to clip the queen's wings, or to use a device which will prevent her from leaving the hive?—N. S.

I prefer a good queen-trap.—G. L. Tinker.

Neither will prevent it. That is not the reason we clip the queen's wing.—Eugene Secor.

Neither plan would have any influence to prevent swarming. As a convenience to aid in hiving swarms, I prefer to clip the queen's wing.—R. L. Taylor.

Neither of these will prevent swarming in the least. If you wish no swarms, run your apiary for extracted honey. Swarming and producing honey in sections go together.—G. M. Doolittle.

Much depends on where the apiary is—if the ground is infested with ants. I should prefer the device to prevent her leaving the hive, instead of clipping her wing.—J. P. H. Brown.

I like a modification of Alley's trap, that allows the queen to pass up near the top of the hive on the outside, and there remain until the swarm can be hived.—J. M. Shuck.

Neither one will prevent swarming. Either of the above methods will work. Some prefer to clip the queen's wing, while others use a queen-trap; but the great majority just "let her rip."—H. D. Cutting.

Give sufficient room by expansion, to accommodate the bees, and keep their attention turned to storing honey. I do not clip the queen's wings, or use any devices.—J. M. Hambaugh.

Use hives giving to the queen at least 80,000 worker-cells, and add surplus combs a little before the honey crop, adding combs as needed. If you want your queens killed, used a device to prevent them from following the swarms.—Dadant & Son.

Neither one "is the best," and neither will do it. Plenty of room given before the swarming-impulse has begun, is the best method I know of; but every one of my queens has one wing clipped, to prevent them going off with a swarm.—A. B. Mason.

Neither will prevent swarming. Both of the above methods are a help in hiving swarms, and in preventing them from absconding to the woods.—C. H. Dibbern.

Clipping the queen's wings will *not prevent* swarming, but the queen can easily be found in front of the hive when a swarm issues. But why try to prevent swarming—that is, a first swarm?—Mrs. L. Harrison.

I would have my queens' wings clipped, by all means, but it does not prevent swarming, and I do not know anything that is entirely satisfactory. Under some circumstances, Alley's queen-trap would be good.—C. C. Miller.

I do not believe in clipping wings, but many do. I believe in a device to prevent queens from leaving. Many do not. The question is an open one, and localities may so far differ as to cause a difference in practice. Neither plan will work at all times, but from the evidence so far, I think that keeping queens from leaving hives is the preferable plan.—J. E. Pond.

Neither will have any influence whatever to prevent swarming, though either will prevent the swarm from going to the woods, at least until a young queen hatches. If the queen be taken away, and all queen-cells but one be destroyed, swarming can be controlled.—M. Mahin.

Clipping the queen's wing will not prevent it. The clipping is only for convenience and safety when they do swarm. Neither is the confining of the queen advisable—it does not prevent the fever or desire which demoralizes the colony.—A. J. Cook.

I say neither. The most profitable way that I know of is to discourage swarming all you can, and then take the best of care of the swarms which issue, giving them every opportunity possible. It is with bees as with boys—it is better to get them not to want to do wrong, than to be locking them up and flogging them for doing wrong.—James Heddon.

Neither of the methods you mention will prevent swarming. It is not the queen that urges out the swarm. Bees will swarm whether the queen can leave the hive or not. The plan of clipping the wing of the queen, and all devices to capture the queen when a swarm issues, are only useful as helps to lessen the labor of managing the swarming nuisance. I prefer the plan of clipping the wing of the queen, to any of the devices yet brought to light. The swarming desire must be satisfied, if bees are expected to work and store honey.—G. W. Demaree.

While both methods will assist in the management of an apiary, neither of them will prevent swarming.—The Editor.

Taking off Surplus Honey.—Hody Hine, of Sedan, Ind., asks the following question about taking off sections of honey:

When is the proper time to take off the surplus honey sections, in order to give the bees time to gather enough honey for winter? I have 2 colonies, but they have not started comb in the surplus honey-sections yet, owing, I suppose, to the dry weather, having had no rain for about three weeks, until last night and to-day.—Hody Hine.

Mr. James Heddon, by request, replies to the above letter as follows:

Here in this locality, which, I believe, is much like your own, I take off the surplus receptacles only when I am thoroughly satisfied that I shall get no more in them. My bees always take care of the brood-department; that is, the storing of plenty to last them through the winter, just the same when the surplus honey-sections are on as when they are off. My rule, at all times of the year, is to get all the honey possible in the surplus sections. If the season happens to turn in such a shape that we find any of the colonies destitute of winter stores, I feed them, but that rarely happens. In your case, I would say, take off the sections when you are satisfied the bees will put nothing more in them—but not before.—James Heddon.

The Nameless Bee-Disease.—Mr. E. F. Allen, of Eau Claire, Wis., on Aug. 3, 1890, sent us some diseased bees for examination, and wrote thus:

I have sent three bees from one hive; the black ones do not leave the hive—if they do, they go about two feet, and then back again, and the other bees kill a good many of them, and have done so since spring. There have been about two quarts of them killed so far. What is the trouble with them? Will Prof. Cook please answer in the Bee Journal?—E. F. Allen.

Prof. Cook's reply to the above letter is as follows:

The trouble with Mr. E. F. Allen's bees is probably the "nameless bee-disease." This is the way it acts. The remedy is to separate the queen. This is not uncommon, and so it is no surprise that it has struck Mr. A's apiary.

It may be that the bees are dying with Tachina parasites (see Bee-Keepers' Guide). I hardly think this the trouble, as it has lasted too long. If the dead bees are carefully dissected, the maggots inside can be seen, in case this is the trouble; or, if the bees are put in a box, the flies may be reared.

In some cases bees act in the way mentioned, when pollen from milk-weed attaches to the legs. I hardly think this the case with Mr. A's bees. They have shown trouble too long, and Mr. A. would have seen the pollen-masses. So I presume it to be the nameless bee-disease, and would advise killing the old queen, and introducing another.—A. J. Cook.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Posters for the American Bee Journal, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the Bee Journal, for use at Fairs, if notified a week or ten days in advance where to send them.

CORRESPONDENCE.

HIVES.

Large or Small Hives in Honey-Production—Which ?

Written for the American Bee Journal

BY CHAS. DADANT.

In his article on the above topic, on page 216, Mr. Doolittle having written that "with large hives, owing to the poor economy of heat, the bees do not begin breeding rapidly......and that most of the bees of such hives, hatching near the close of the harvest, become consumers instead of gatherers," I answered (see page 325), showing that the largest crop obtained by Mr. Doolittle from a single hive—566 pounds of extracted honey—was harvested by the bees of a very large hive containing 32 combs.

In his answer, on page 505, Mr. D. says that small hives are to be used only when working for comb honey, adding that I was not perfectly fair to my readers, for I had not told them that I work for extracted honey, and that he is certain that I am ignorant of the best hives and the best methods of producing comb honey.

He forgets that I have been in the bee-business in this country since 1863, having begun about six years before the invention of the extractor. Besides, as extracted honey was, in the beginning, difficult to sell at paying figures, my main crop, until about 15 years ago, was comb honey, produced at first in the square Quinby glazed boxes, supported by T supers, then in the Adair 3-pound sections, and, at last, in the one and two pound sections, such as the ones in use now. During these progressive changes, I had large hives side by side with the 10-frame Langstroth, and every year the results proved in favor of the large hives. I continued to produce partly comb honey until about six or seven years ago, when, looking for less work and more profit, I determined to produce only extracted honey.

Mr. Doolittle says, also: "When it comes to extracted honey, we want large hives, every time." Will Mr. Doolittle please explain such a difference ? I cannot understand it. If a colony of bees in a large hive cannot economize heat to rear honey-gatherers in time to gather comb honey from the white clover crop, how can the same colony, in the same hive, rear gatherers in time to get a crop of extracted honey from the same flower ?

I cannot see why I take the trouble of writing all the foregoing, since Mr. Doolittle himself gives the proof of the superiority of large hives, even when working for comb honey, when compared to small ones ; and I cannot understand why he was not convinced by his own experiment.

He writes, on page 505, that the colony which gave him 566 pounds of extracted honey had about 15 frames filled with brood, and that another colony, *of about equal strength*, gave him 309 pounds of comb honey. Of course this last colony could not be *about as strong as the first one* unless it had also about 15 combs full of brood, besides the comb, containing honey and pollen ; for no bee-keeper would believe that a colony having but 8 combs of brood (see page 216) can have as many bees as another having 15 combs filled with young by the queen. Then these 309 pounds of comb honey were the product, not of a small, but of a large hive, and I wonder why, after such a result, Mr. D. can be a partisan of nine-Gallup-frame hives, even for producing comb honey.

Mr. Doolittle adds that the reason why he prefers to produce comb honey instead of extracted, came from the fact that his 566 pounds of extracted honey brought $16.72 less than the 309 pounds of comb honey. It was about 15 years ago, but times have changed ; everybody knows that now good extracted honey sells always for more than half the price of comb honey. Mr. Root, in his paper for Oct. 1, 1889, offered for sale white comb honey in 20-pound crates at 16 cents a pound, and extracted in 60-pound cans at 10 cents; at such prices, the 309 pounds of comb honey would have brought to Mr. Doolittle $49.44, and the 566 pounds, $56.60, or $7.16 more.

Of course, Mr. Doolittle, in his articles, tries to benefit his readers ; I hope that he will pardon me for my criticisms, for I try to do the same, in pointing out those of his ideas that I consider unsound, letting the readers draw their own conclusions.

Hamilton, Ills.

HONEY.

Its Great Value as Food and Medicine.

Written for the Iowa Homestead

BY W. M. BOMBERGER.

The wholesale and extensive consumption of sugar as a saccharine food in a pure state, or when entrusted to the art of the kitchen, is deleterious to the health. In the preparations of food for the table, and when the selection is left to the individual, who gives no thought to health, food, and its selection is prepared with reference to the palate, and a pandering to the taste. If hunger in all cases was a healthy craving, and foods were properly prepared, this would be all right. But it is not—not in the majority of cases.

If the kitchen could return sugar into the same conditions when in cane and beets, and when eating our palatable dishes we could eat it so mingled in bulk foods, it would be all right and good. The adult or child that goes to the extreme, or is considered too nice to eat anything else than cake, is or will be the physician's charge as much as the all-corn-fed porker or suckling will need cholera medicine.

Extensive use of sugar on fruits is not as bad as the cake and cooky mania that rages in so many kitchens. The fruit acids largely neutralize the indiscriminate and injudicious use of sugar. It is no serious thing to eat considerable saccharine food in a pure state, but not in the form of pure refined sugar.

If eaten and taken in the form of honey, it at once becomes a valuable medicine food. Instead of having it given us in this form in a mixture with bulk foods, as in the cane and beet, we have it mingled with fruit juices exuded from flowers, highly charged with medicinal properties in the alchemy of nature, and the apothecary of the bee-hive.

The advantages of honey as a medicine or food are too extensive to be considered at length here. Honey taken as a food becomes a powerful medicine to the sugar-fed and half-diseased, and many must begin on small quantities and acquire an appetite for it. Many declare against it, although they like it, but claim that it does not agree with them. In these cases the person either pursues an improper diet, or eats one or two pounds at the first sitting, before being accustomed to it, and may be eats raw, unripe honey.

Honey I consider a cold-weather food. During the hot weather we get sufficient saccharine food by sugaring acid fruits in early summer. In late summer and early fall the toothsome grape and the delicious summer and fall apple furnish sufficient ; but when these are gone, and cool weather sets in, and meats and fats are consumed in large quantities, fine, well-ripened clover, linden or buckwheat honey is a fine corrective and laxative.

Because of the expensiveness of lumber, most farmers in the West live in houses that are small, close and covered, that cannot be properly ventilated. In these the temperature is too often kept up into the nineties by a soft-coal stove, which with the best of draughts, emits gases.

Foul air, improper ventilation, coal gases, together with the sudden change and exposure of lungs and throat to zero weather, or worse, in a moment, is the source to no end of throat and bronchial troubles. A free, regular and constant use of honey is probably the best medicine for throat troubles there is, and its regular use would be largely corrective here. It is always best to take our medicine and food together.

Harlan, Iowa.

FOUL BROOD.

Why it Required Legislative Action in Canada.

Read at the Oxford, Ont., Convention

BY J. E. FRITH.

My object is not to write a scientific article on foul brood, but to give such facts as every one may understand and have clearer conceptions as to the passage of the recent Bill by the Ontario Legislature, dealing with the contagious disease among bees, known as foul brood, or perhaps, more properly "bacillus alveus."

Foul brood is by no means a new disease. It has existed in all ages. We read of its attacks upon apiaries long before America was known to civilization, ages before old England was thought of, or the Christian era established. The facilities of conveying knowledge at the present time informs us that foul brood is doing its deadly work in all countries where bees are kept. Here and there, all over the continent, whole apiaries are being swept out of existence, even whole districts succumb to its fearful ravages,and yet 90 per cent.of the bee-keepers throughout the country do not seem to realize the consequences to the bee-industry.

Let a contagious disease appear among cattle, sweep off 50 cows for some farmer, pass on to the next and kill 10, to another and a hundred are worse than useless, and so on for a radius of a dozen miles. How would the disaster affect dairymen? How much greater would the calamity appear, *be*, were the disease raging in 50 localities throughout Ontario, and this is exactly the bee-keepers' position to-day. Foul brood is more or less undermining the bee-industry of Ontario. Whole apiaries have gone under, and in some cases the bee-keeper has been forced into bankruptcy. The disease is far more prevalent than most people are aware of.

Young bee-keepers, and old ones too, are slow "to own up," hence their neighbors become victims to its deadly doings before they have even dreamed of its existence in their vicinity. This should not be, nevertheless it is a fact. Large bee-keepers all over the land are "hauling in sail" for fear of the subtle storm. Had open frankness existed along this line, many an ably equipped and successful apiary to-day would have been remunerating hard toil. Every bee-keeper ought to throw out the danger light. Every bee-keeper does not do it, and every bee-man will not do it, until compelled to by "a whip to keep a coward to his track." I will illustrate by one fact, for "facts be stubborn things."

An honest man, for so he is called, rushes into the bee-business, without at all acquainting himself with its "ups and downs," its "cloud and sunshine," much less with its scientific and practical working. His grand-dad had bees, and he heard a lot at a meeting, didn't pay for it either, and read some more in a paper, and saw some honey at a store in cakes, and knows a "heap o' things." This bee-keeper boomed along by the old swarming method until he had fifty or more colonies. He gets some more knowledge, and must have a queen. "Cheapest best" (?), and despite every warning, makes the contemplated improvement, from a foul-broody district, of course.

Two years, or thereabouts, Neighbor Caution, on making enquiries regarding his friend Know Much's apiarian success, finds that the booming apiary had collapsed with foul brood, and the proprietor was sorry to admit it. This actually took place within two miles of a flourishing apiary of over one hundred colonies. On close examination it was found that 40 per cent. of the apiary was affected, and that all the bees for miles around were dying from some cause. Three hundred colonies went under. Why? Just because the "red light" was not thrown out in time.

This thing is being repeated in more than one place in this province. This illustration shows up but one class, the most dangerous of all. We do not wish to illustrate the every-man-for-himself man, who, to close his accounts in balance, disposed of his bees at his neighbor's cost; or the misery-loves-company man, who allows his neighbor's bees to get the disease without warning him of the danger, or the absolutely selfish and jealous man, who throws diseased combs into his neighbor's bee-yard.

We know a man who sat at the entrance of his worn-out colony of blacks and vindicatively killed "them 'ere Hitalians of Joneses what's bin a robbin' on of his honey." The joke in this turned on himself, for he destroyed his hybrid colony, mistaking them for Italians. It is the spirit of the action. He did not throw foul brood into your bee-yard! He'd do it everytime. Fortunately this class is few. Without more, danger lurks around, and to protect honest bee-masters, it was necessary to hedge them around, and to say by law, "hitherto shalt thou come, but no further."

Though it be not my province in this article to discuss fully the many exciting theories regarding foul brood or its origin, yet it appears quite necessary at this juncture to ask and answer the question, "What is foul brood?" From scientific and practical observations and researches the name *bacilus alveus* has been applied to the disease. The term means a hollow stick or hair, or, in plural form, sticks or hairs with or without a seed or berry on the end, which appear to be very rudimentary in foul brood.

A good illustration of bacillus would be thistle down, dandelion seed, burdock seed, or beggar-lice. When applied to foul brood, there appears to be but one stick or hair, but having the power of adhering to any and every thing. Hence the disease is very contagious. Those "wee" (for they are so exceedingly small that thousands of them can adhere to the point of a cambric needle) seeds may be, and are conveyed in many ways. They adhere to anything, float in any congenial liquid, and fly by means of the hollow hair or hairs, upon the "wings of the wind."

These little seeds, when dormant or ripe, are partially carried out by the bees and distributed long distances by the wind on flowers, or at the entrance of other hives, and thence carried by unwary workers to their homes, there to repeat its destruction. Some of the seed adheres to the walls of the cell, and young larvæ born then die, or rather are eaten up. Bees manipulating this disease carry some of the sticks to other cells. So the contagion goes on. It can be and is carried in a hundred ways. The most prolific source of contagion being by honey, in which the sticks float with amazing ease.

The disease is highly malignant because it is "hostile to life," in fact, it is fatal. It is now an undisputed fact, that a larva attacked by this insect, seed, germ, or whatever it may be, certainly dies, is eaten up, and converted into a thousand other animalcules, some say a billion, just as a farmer converts corn into beef and pork, grass into milk and butter, or hay and feed into other animals. Let us magnify. Turn a pair of wolves into a sheep-fold. If left to "nature's course," they will eat up the sheep.

reproduce themselves, go to the next fold and repeat, and so on. Death to the sheep, certain death. The phenomenon is easy of solution. A similar process goes on with infinitesimally small foul broods. We simply see the results—death to larval bees.

I take strong grounds against the expressed views that there is incipient or mild type of foul brood. I expect to step on "corned" theories. If they hurt, kick. An incipient or mild type of wolf, lion, tiger, hawk, eagle, Canada thistle, hay cholera, small-pox, etc.! Surely the idea is ideal. We would like to see a sample. If you have a pair, so to speak, of foul brood, death is in the cell. You simply have a little, and if not eradicated, you very soon will have much.

One germ is as malignant as a million. It is only by the difference in numbers—quantity. The less the number or quantity, the less slowly contagion goes on; the greater the number, the more rapid and more violent the contagion. One seed or pair of seeds attack a larva. A very short time, and millions are produced. One larva is eaten up, a thousand "seeds find a lodging place, and a thousand bees go the way of all living." Death of one, and death of a thousand, that is all! It is malign! It is death, all the same!

In order to correct a few false ideas, which have a specific bearing upon the requirement of legislation, I will endeavor to make clear the origin of foul brood. Where is or was the beginning or origin of anything, either animal or vegetable? Foul brood certainly belongs to one of the great kingdoms of life. It is not a chemical process. In the beginning, etc., and again everything brought forth seed after its kind. It simply had its origin away back in the ages.

It was, like every other living thing, created by a superior intelligence, and like every other living thing, it has been endowed with reproducing faculties. All that is needed is that the seed take root in some appropriate soil or congenial atmosphere. Decapitated drones, filthy hives, and such things have nothing to do with the matter. Why not rats, mice, vermin, etc., spring up in existence in similar ways? Cut off the heads of bulls and rams, and men will spring spontaneously into being. Fill the valleys with filth and look for noble herds to come forth. Nonsense! Put the seed into the ground and harvest will be sure; the male and female into the herd, and the cattle upon a thousand hills appear, the seed germ, or whatever it is, male and female, into a clean, pure, white, sweet, young bee, and millions of foul brood are born in a day. Foul brood beings do not like filth. They want just a living, juicy bee or similar food, and the work goes on.

Can the disease be cured, is the critical question of the day? Yes. Why is it not generally and satisfactorily done? Why are not all the rattle-snakes in America killed, the cobras of Asia, the lions of the jungle, the rabbits of Australia, or sharks of the sea? A lion can be shot if seen, or poisoned if persuaded to take bait. If either cannot be done, a thousand shots fired into a jungle may not take effect. A rattle-snake come in contact with may be killed, but all the sticks and stones hurled at the rocks will not reach those in its crevices and holes. Foul brood can hide in the holes and crevices of bee-cells, and in the forests of growth upon their walls as safely from all the drops of acid or other missiles that may be fired at them. Many may be, and are killed, but some escape, live and reproduce.

Once in awhile a bee-keeper may, and does, succeed in arresting the disease, but it is under very favorable circumstances that it can be successfully accomplished. It is doubtful if there be a method in existence that will work satisfactorily in anything like a maximum percentage of cases under all circumstances. I have tried the best known methods. They cure, but in circumstances similar to ours, the cure about equals the loss by disease in cost. Were I again to be similarly placed, the most perfect of all purifiers, fire, will do the work of curing. It is the simplest, quickest and best in the long run.

These facts, merely hinted at, carried out in practical detail, have led a goodly number of our best and most successful bee-men to put forth effort in securing legislation. These facts laid before our legislators, aroused their sympathies toward an honest and profitable industry, and to-day the business has its first protecting barrier. The Bill may be severe. If any one should lose one to five thousand dollars through the wanton abuse of privilege, would they say so? Own up. Be honest for once, and fall in line. Magnify our law and give to the world, to our neighbor, the purest, cleanest, highest, healthiest bees in existence.

Woodstock, Ont.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

BROOD-COMBS.

The Proper Distance to Space Combs in the Hive.

Written for the American Bee Journal

BY REV. W. P. FAYLOR.

The article from Mr. Z. T. Hawk, on page 487, calls me out again. He seems to think that bees of their own accord build their combs in hollow trees and box-hives, 1½ inches from centre to centre; but what are the facts in the case? Observation and experience both prove that this is not exact. In my former communication, I said that bees build all the main combs not less than 1½ inches from centre to centre; and they usually average the distance much more than this.

I have just recently transferred 5 colonies of bees from box-hives, and knocked the tops off of two more to get some honey for a neighbor. Many of these combs were as far as 2 inches from centre to centre, and the nearest I found any of the brood-combs from centre to centre was 1⅝ inches. It will be readily understood why bees in box-hives come out so strong in the spring. They thus have room to cluster in goodly numbers together, with plenty of stores all through the winter just above their little heads.

Where bees are wintered on combs closely spaced, they soon consume the honey in the middle of the hive, and must run back and forth to the outside combs to get food, to the inside of the cluster. This worries them, and hence shortens their lives.

Mr. Hawk says: "When bees are wintered in chaff hives or the cellar, this matter of close or wide spacing cuts a very insignificant figure." I admit that the difference in wintering would not be so great, but is it not a fact that not more than one colony of bees out of a hundred, and possibly not more than one out of every thousand, ever see the inside of a chaff hive at all?

Again, Mr. Hawk tries to make a point for close spacing, from the "bulging theory." If the bees are left to care for themselves, no matter how wide or close frames are spaced, they will widen out some combs more than others. It is the business of the bee-keeper to notice in the start what newly-hived swarms are "up to," and how they build their combs. I have not a single comb in my whole apiary but what can be changed for any other, and will fit between any two combs in the yard, without being shaved off, either.

Mr. Hawk further asserts that when a cell is once lengthened, the bees never shorten it again. I wonder that any bee-man would take such a position. I have combs at present that are filled with brood from bottom to top, that last winter were widened considerably. Many a time I have found the combs in box-hives filled with brood from bottom to top, and certainly others have observed the same thing, and the extra length of cells is made use of for capping the brood. I do not blame the bees for not wanting to put brood in combs that are so close together that enough bees cannot get over the cells to keep the brood warm. They are sensible little creatures, and know what they are about.

But again, Mr. Hawk thinks that bees are slower to enter the sections when combs are spaced 1½ inches from centre to centre. Last season Dr. Johnson kept an apiary within 30 rods of my bees, and all his hives had the brood-frames spaced 1⅜ inches from centre to centre. We had about an equal number of colonies of about the same color and "blood." Mr. Johnson understands the business, too, and yet my bees beat his to the amount of 59 pounds to the colony, in storing surplus honey. My hives were all eight-frame, and his were partly ten-frame.

When combs are spaced far enough apart to give ventilated passage-ways to upper stories, bees are not so apt to lounge about the outside of their hives, and prefer the sections to the outer surface.

Let it be remembered that combs spaced 1½ inches from centre to centre, is not a wide spacing, only a medium spacing. Any spacing closer than 1½ inches, I regard as close spacing.

St. Bernice, Ind.

CARNIOLANS.

My Experience with them During Three Seasons.

Written for the Pacific Rural Press

BY S. L. WATKINS.

As I have had considerable experience with this race of bees during the last three seasons, a few items concerning them may be interesting and valuable to your many readers. I will first state that I have no bees of this race for sale.

The average Carniolan, as I find them, are about the most easily handled of any race of bees, although when crossed with the Italians, they are a little more irritable; but for an all-purpose bee, I should prefer a cross between the Carniolan and Italian.

As regards their working capabilities, they are superior to any other race. They go to work earlier in the morning, and this sometimes counts a good deal when they are working on plants that yield honey only early in the morning. Another good point in their favor is that they are longer lived than the average bee, thus making them a desirable acquisition to bee-keepers located in cold and uncertain climates, where they are confined so long in winter time.

Carniolan bees are not given to robbing to any extent, and are vigorous defenders of their hive. The queens of this race are quite variable, some being of a beautiful lemon color, and again others that could not be told from the average black queen; yet all produce workers of the same typical characteristics.

The variation in color of the Carniolan queens is no indication that the race is not pure, as the uniformity in color of any race is accomplished only by the breeder.

All the young queens of the Carniolan race produce bees more or less banded. They become more uniform in color, as the age of the queen advances.

Carniolan bees are characteristic by a scarcely distinguishable shade of yellow on the first segment of the abdomen, and then follow several broad, silvery bands, giving the bees a beautiful silvery appearance. Their wings also are of a glossy, silvery brightness. Queens of this race are exceedingly prolific, and this accounts for their great propensity to swarm; but when handled rightly and given plenty of room, this is overcome to a great extent.

Carniolans after being crossed with other races, continue their prolificness for several generations afterward. As they possess several virtues of their own, and most of the desirable characteristics possessed by other races, they are indeed a valuable race to cross with. These bees being natives of a cold and windy climate, and being restricted to short forage in certain seasons, they have naturally solidified themselves into a very hardy race. I have received several letters from Northern California apiarists, who speak highly of their hardiness, good wintering qualities, etc. In the higher Sierras the bees last winter were covered with from 5 to 25 feet of snow, and in some places they did not have a fly-spell for three months. One man writes from Sierra county that out of 54 colonies he has only 12 left. All of these 12 are Carniolans, and they came through bright and strong. He lost all of his Italians and blacks.

The Carniolan race of bees cap the cells of their combs with wax of snowy whiteness—in fact, combs and all are exceedingly white, more so than combs built by any other race of bees. In this matter of white-comb building, it counts a great deal in the eyes of the bee-keeper.

They gather very little propolis, thus leaving the frames easy to handle, and the sections a pleasure to take off, as they are as clean as when they were put on.

I used to be annoyed considerably by robbing when I kept nothing but Italians—sometimes it was almost uncontrollable; but when I got the Carniolan race pretty well introduced, I had hardly any trouble with robbers.

I am fully convinced that this race of bees possesses very desirable characteristics as regards very white-comb building, gentleness, prolificness, and non-robbing disposition. It is my opinion that in the near future they will play a prominent part in apiaries where Italians are now the favorites. In this part of California they have proved a valuable race.

Grizzly Flats, Calif.

GRANULATION.

The Importance of Granulated Honey in Premium-Lists.

Written for the American Bee Journal

BY R. F. HOLTERMANN.

The premium-lists of some of the leading exhibitions in America have given me a thought which I think should be recorded for the benefit of bee-keepers. An article in the *Bee-Keepers' Review*, by Chas. Dadant, confirms that opinion. What are we doing to educate the public to look upon granulated honey as pure honey? Very little is certainly being done by our exhibitions, when the term granulated honey is not even mentioned in the premium-list.

If granulated honey could be found in the list, many could take advantage of the circumstance, and show that honey granulated solid must be a genuine article, or a premium would not be given for it. Let every one use what influence he may have, to see this matter remedied. There must be no relaxation in the matter, and the display of granulated honey is more necessary than that of honey-bearing plants, honey-vinegar, honey-cakes, etc.

We cannot altogether prevent the granulation of honey. By that I mean, no matter how much we show how granulation may be prevented, and no matter how much we may exert ourselves to get others to prevent it, honey will be allowed to granulate, and for this reason we may as well educate the public to the facts of the matter, and say, "Honey will granulate;" and this is no proof that it is impure—rather that it is pure, although all pure honey may not granulate.

As far as my tastes are concerned, I eat it when I can, every day of the year, and no bee-keeper need be afraid to place honey before me. I like it granulated fully as well as when re-liquified, and I believe that I like it granulated as well as liquified before granulation; and I practice just what I preach in the matter when I say that honey is a wholesome food, nourishing, healthful to the bulk of mankind as any ordinary food; cheap, for a dollar's worth of honey has more food in it than a dollar's worth of our ordinary fruits which we can. A can of fruit must the greater part of the year be consumed shortly after opening; honey is not so, for it can be kept in a dry atmosphere for any length of time, and still remain a good article of food.

Romney, Ont.

GOING HOME.

Bees and Insects Finding their Way Home.

Translated from the Kolnische Zeitung.

It is well known that the common honey-bee often visits places many kilometres distant from its parent colony. One finds the insect, for instance, in rape fields, and upon moors miles away from any apiary. In such cases they do not show any signs of having lost their way, but on the contrary, when they have collected their load, fly off without hesitation in a fixed direction clearly towards their home, and upon their arrival they make no mistake about the hive to which they belong, but each individual lands upon the alighting-board of its proper dwelling. These and similar facts give rise to the interesting question—Do the far-flying insect possess a peculiarly instinctively operating sense of locality, or do they direct their course, as others do, by means of landmarks with which they have gradually become acquainted?

The partisans of the blind-instinct theory have always been inclined to decide in favor of this peculiar sense of locality, and one of the most zealous of these, Fabre, believes that he has supported his views by actual trials made. He took ten bees of the genus Chalicodoma, which were established in the vicinity of his house, marked them with a white spot on the back, and put them in a bag. He carried them half a kilometre away to the east, swung the bag repeatedly and rapidly round his head, went then towards the west the bag being closed all the time, and carried his prisoners in that direction until they were three kilometres (about two miles) distant from their nest. Here they were again twirled around, and then separately liberated. They flew around him a few times, and disappeared "in the direction of their home." Fabre's daughter was there in waiting, and noted the arrival of the bees. The first appeared after the lapse of a quarter of an hour, two more in the course of the next hour; seven did not return at all.

On the following day the trial was repeated; the first bee arrived after five minutes, two more within an hour, and again seven remained out. By various repetitions of the experiment, in which the insects were conveyed by roundabout ways to the place of liberation, the same average results were obtained. About one-third of the bees found their way home in periods varying from a few minutes to a few hours; the rest did not return. "The trial," says Fabre, "is decisive; neither the complicated whiling movements, nor the artificial roundabout ways can confuse the Chalicodomas, or prevent them from finding their nest." He concludes accordingly that the animals are guided by a special sense of locality.

If the trials, however, are closely examined, they will be found to prove directly the contrary of that which their originators would gather from them. If a direct-acting instinct be assumed, then it should show itself equally in all the bees, and not only a third part, but the whole number of the liberated bees should find their way home, with exception perhaps of very few that might possibly meet with some accident in a flight of a few kilometres. It would be inconceivable that two-thirds should remain out.

This is, however, quite comprehensible, if we assume that the bees do not at first know whether they should fly. In that case they will disperse in all possible directions; the one-half will fly so that from the start they go only further from the nest, and these become lost; of the other half, a small portion fly almost directly towards their nest, arrive soon in a neighborhood known to them, take their bearings, and arrive home in a few minutes; the others fly in an intermediate direction, and make excursions here and there. A portion are lucky, come to some known spot, and so find their way home, but only after hours of search; the others are not so fortunate, and are consequently lost.

This is exactly the state of things shown by Fabre's experiment insects, and his results therefore tend to show that the Chalicodomas in fact could only find their way home when chance had brought them to a place known to them from previous flights. This is also in accordance with their manner of starting when liberated; they fly first upwards in circles, like carrier-pigeons that wish to obtain a general view of the surrounding neighborhood.

Fabre's statement that his bees after making a few rounds all flew in the homeward direction is doubtful to himself; he makes it with reservation, and it cannot be correct, for in that case so many of his insects could not have been lost. Even those that did arrive home would then have had no cause to remain out for hours.

The two English naturalists, Lubbock and Romanes, have made similar experiments, the first with ants, the latter with bees, and both have arrived at results which plainly contradict the instinct theory. Lubbock set a glass full of honey near an ant's nest, and after a number of ants had climbed into it, he carried it carefully on to a board which was placed in the first experiment only 18 inches, and in the second 50 yards distant from the nest. The ants now missed their usual means of guarding their course—the retracing of their own foot-track—and showed that they were confused. They left the board in every possible direction. From the trifling distance of 18 inches they found their way back to the nest, but only after long wanderings about, and when chance brought them into its close vicinity; but in the distance of 50 yards they were hopelessly lost.

Romanes brought bees into a house in the neighborhood of the sea. To both sides of the house were extensive flower beds, but between the house and the sea lay 200 metres of meadow land. It was therefore to be assumed that the bees, if they diverted their course by ordinary means, would soon become acquainted with the neighborhood on each side of the house; in the direction towards the sea, however, they had nothing to look for, as the meadows offered nothing useful to them. A bee-hive was fixed up in a room in the house, and time was allowed for the insects to become acquainted with the neighborhood.

At night time the window and the entrance to the hive were closed; in the morning the desired number of bees were let out of the hive, caught on the window-panes, and counted into a box. The alighting-board of the hive was then brushed over with bird-lime, so that every bee returning to the hive would be at once stuck fast and kept for examination. When the imprisoned bees were liberated on the flower-beds, they were regularly found after a few minutes stuck upon the alighting-board; but when they were brought to the seashore, not one came back.

More than this, when Romanes liberated the insects on the meadow, only 200 yards distant from the house, not a single one found its way home, whilst a similar distance over the flower garden was so quickly covered that the observer would find the bees already sticking to the alighting-board, no matter how quickly he would run back to the house himself. Herewith then it is clearly shown that the bees found themselves at home wherever and because they were acquainted with the locality by previous visits, whereas there, where they had no previous knowledge, on the meadows and on the seashore, every means of directing their course failed them. They guided themselves therefore by means of previously-gained experience, just as carrier-pigeons and as men do.

After adducing other instances of the manner in which some non-gregarious bees and wasps find their way to their nests built in the ground, or in sand-hills, or in empty snail-shells, and their proceedings when attempts are made to puzzle them by shifting their landmarks, the writer concludes as follows:

"Viewed in this manner, the powers of guidance of the insects loses much of its marvelous character, but it becomes only so much the more interesting. We see how the animal, simply by a sensible use of its natural resources, accomplishes things which at first sight appear difficult of explanation even to our so much more developed powers."

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Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith. Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Reversible Frame—Honey Crop.

I send by this mail a sample of a simple device for reversible frames. By attaching one on each corner of the frames, they can be quickly and easily reversed. I do not know whether it is new or old.

The honey crop in Southern Indiana failed to "pan out," as was expected in early spring. White clover was never more abundant, and the promise of an abundant harvest was cut short by the dry weather. 600 pounds of comb and 200 pounds of extracted was the sum total of my crop from 18 colonies. I get 20 cents per pound for all the comb honey I have to sell, in my home market. W. C. R. KEMP.

Orleans, Ind., Aug. 1, 1890.

[The device for reversing frames is a piece of tin bent over the ends of the frame, with a slot and screw, allowing it to project at will. We have several in our Museum made on the same principle—so that it is not *new*.—ED.]

Bee-Keeping in Australia.

No doubt the readers of the BEE JOURNAL will be surprised to receive a letter from this part of the globe; however, it will let them know that we are not quite "dead" in the bee-keeping line out here. I am a member of the Hunter River Bee-Keepers' Association, of New South Wales—the only association in the country towns that I know of. Through it I have received several copies of the AMERICAN BEE JOURNAL, and I must admit that I have been greatly instructed by reading them.

We have only one bee-paper in the colonies, or rather New Zealand, and that is the *Australasian Bee Journal*, published once a month at Auckland, and edited by Mr. Isaac Hopkins—one of the foremost men in bee-culture in the Southern Hemisphere. Lately, however, that periodical has been incorporated with the New Zealand *Farmer*, which now appears as the New Zealand *Farmer, Bee and Poultry Journal*. I think that more space will now be available for apicultural items.

In reading the AMERICAN BEE JOURNAL, one out here cannot but be impressed with the amount of trouble American bee-keepers have in wintering bees. It is the middle of winter with us now, and yet every fine day my bees are carrying in pollen. Why, to see snow once in ten years on the mountains, in this locality, is something out of the common, and, as regards frosts, we but seldom see ice. It will thus be seen what a mild climate we have. White clover and basswood, or linden, seem to be your chief sources of honey. We have the far-famed eucalyptus trees, which are of great value to the bees. Then alfalfa, or lucerne, thrives well here; also hoarhound, and many other plants; but the climate is rather too hot for white clover and basswood. We have no other than black bees here, but there are plenty of Italians in the colony, and next spring I hope to introduce them. As far as I know there are no Syrian, Carniolan or Cyprian bees in this Colony. Bee-keeping is only in its infancy here, but in the course of a few years I expect it to take great strides. W. SHAW.

Mudgee, New South Wales, July 11, 1890.

A Dry Outlook for Apiarists.

The honey crop here is almost an entire failure. The intensely hot, dry days of the past week, have pretty effectually killed the clover. It is a very *dry* outlook for bee-keepers here. C. H. DIBBERN.

Milan, Ills., Aug. 4, 1890.

Ready for the Fall Crop.

Bees had a very poor spring this year, but got a little honey in June—just enough to create some swarming. I now have located in my home apiary 1,000 colonies of bees, and all are in fine condition for the fall crop of honey. E. STAHL.

Kenner, La., Aug. 1, 1890.

Slim Crop of Poor Honey.

The honey crop hereabouts will be very slim this fall, and the honey of poor quality. Last year, with 22 colonies, spring count, I had 2,125 pounds of choice honey; this year, with 36 colonies, I will not have 500 pounds of good, bad and indifferent honey, with an increase of 13 colonies. S. H. HERRICK.

Rockford, Ills., Aug. 1, 1890.

The Lake Pepin Disaster.

The account of the Lake Pepin disaster, on page 500, is erroneous. The Investigating Committee find that there were only 204 persons in all; 98 dead bodies the Red Wing authorities say, and 104 escaped—at first they said 100 bodies. The baby story was all a hoax. Mr. Basey nor I know of no such thing. I was at the wreck, which lay in sight of my house until all the bodies were found. EDWIN WILSON.

Lake City, Minn., July 30, 1890.

By request, Rev. S. Roese replies to the above as follows:

Since receiving statements and official report concerning the late Red Wing disaster, I find that the number of saved and lost, as stated on page 500, is somewhat incorrect. Early newspaper reports concerning the lost and saved, were somewhat conflicting and incorrect, and the baby story wholly without foundation. I sent to the Lake City *Republican* office for more official statements and reports, and on reviewing the same, a "special" published July 19, with a statement of D. W.

Wethern, Captain of the ill-fated Red Wing, and E. M. Niles, Clerk, who both said that 147 excursionists took passage on the Red Wing, and on return an additional number (two ladies from the steamer Wanderer, and eight men from the steamer Undine, with about ten more residents from Lake City, who wished to take passage to Red Wing), which would have been about 175 in all; but a few passengers of those who came down, failed to get back in time to reach the boat on its return, which fact would leave the number of passengers on board under 175.

The passengers on board the barge which was cut loose from the steamer on capsizing, were drifted near Lake City, and all saved, and many lives were saved besides, by the heroic efforts of citizens and soldiers during the night, so that the list of saved, according to the Lake City *Republican's* special of July 19, would amount to 80, and the list of lost 98; and according to this last number, memorial services were held on July 25, in Red Wing. Some late papers have the number of lost at 103, but it is the belief of many that all the dead bodies have not been found yet.

STEPHEN ROESE.
Maiden Rock, Wis., Aug. 4, 1890.

Hardly Gathered a Living.

Our big honey-flow run up against a stone wall about July 10; since that time the bees have run a little behind on their board bill, but should the drouth break in time, we will be in good condition for buckwheat and other fall honey. As near as I can learn, bees have stored on an average about 20 pounds per colony, spring count, in this vicinity.

F. E. BURROWS.
Delavan, Wis., Aug. 1, 1890.

Three Years of Total Failure.

This has been a very disastrous year for me. I had great expectations, as everything looked so promising last spring, but here I am so far without one pound of surplus, no swarms, and I have no hopes of any buckwheat honey, as it is completely dried up. This is three years of total failure here, and I fear it will be too much for me.

T. S. SANFORD.
New Castle, Pa., Aug. 14, 1890.

The Season in Wisconsin.

At this time we expect to hear reports of the honey crop. My bees came out of the cellar in good condition, without the loss of any. One colony swarmed out in the spring. I have had but one natural swarm. Cold, wet weather continued until the last day of June, so that the bees were almost entirely destitute of any stores, and some of them just on the point of starving. Brood-rearing entirely stopped. I believe that there really was less bees on June 15, than when I put them out in April; but now the hives are full of bees and honey. Most of the bee-keepers think that because they have no surplus, there is no honey, or the bees have not done anything; but they have done well, it seems to me, considering their condition and the short time that they had to do it in. My bees are working in the sections now; I have taken less than 200 pounds from 31 colonies. White clover will be gone in a few days, the hot, dry weather drying it out, but I am looking for a fall crop if we get rain in time. I sent to Washington for some Chapman honey-plant seed last year, and it has blossomed this year. I think that it is one of the best of bee-forage plants. I shall save the seed.

F. COUNCELMAN.
Doylestown, Wis., Aug. 1, 1890.

Much Swarming—Little Honey.

There seemed to be no nectar in white clover, and the bees were living from hand to mouth until basswood bloomed, then, of course, they had lots of room in the brood-chamber for honey, and they put it there; consequently we got but very little surplus. I had 9 colonies in the spring, increased to 14, and have an average of 24 pounds of basswood comb honey per colony, spring count. My bees have averaged better than any I know of. This has been another great season for swarming with some; one man, three miles from me, had 8 colonies in the spring, and now he has 40, so it can be guessed about how much honey he has, and how many dead colonies he will have next spring, if he undertakes to winter them without feeding. It is very dry here, and the prospect for a fall crop of honey is very poor.

J. S. MCINTIRE.
Maple Plain, Minn., Aug. 5, 1890.

No Honey and no Swarms.

My 14 colonies wintered all right, and I had my first swarm on May 28, and had 11 first swarms; second swarms I put back. I have 25 colonies in all, have not a pound section full of honey yet, and expect no more swarms. My bees are killing off drones now.

ROBERT SCHULTZ.
Alma, Wis.

Suffering for Moisture.

I have now 140 colonies of bees in fair condition for winter, from 80 colonies in the spring, after the great dwindling. I have no surplus honey to speak of, and do not expect any unless it rains very soon. Two years ago one very heavy shower, the last day of July, gave me over 2,000 pounds of fine golden-rod honey. Everything in this locality is suffering badly for moisture now.

J. L. GRAY.
St. Cloud, Minn., Aug. 1, 1890.

Honey Crop a Failure, etc.

The honey crop is a failure in Central Wisconsin this year. My bees wintered well—only lost one colony, having 40 colonies, spring count, and 14 new swarms since. I put my bees into the cellar very early, and did not take them out until the weather was settled, and they could gather pollen. Most of the bee-keepers through this country lost from 50 to 70 per cent. of their bees last winter. I never had any great loss in wintering my bees in the cellar. I keep the temperature of my cellar from 35 degrees to 40 degrees, and remove all dead bees from the bottom-board at least once a week. I am using the Langstroth hive, with the bottom-boards hooked on. I make no change for wintering, leaving the same honey-boards on that I use in the summer, remove the cap, and put them in the cellar.

A. N. DEGROFF.
Berlin, Wis., Aug. 4, 1890.

The Mysteries of the Hive.

Recently a "pioneer" bee-keeper was viewing my bees; passing through the aisles, he saw a drone, and said that they were the only *she* bees there were. Leading lights sometimes disagree! He said he thought it wrong to kill such bees. I was transferring a colony once, and a young lady was looking on to see the queen, when a drone made its appearance, looking larger than a worker, so that her attention was drawn to it. She desired to know what kind of bee it was, and when told that it was a drone, she wished to know what *it* was for. I told her it was a *voracious* eater, etc. If she was curious enough to investigate, may be she has discovered its various uses ere this.

Though using a different hive from Mr. Doolittle, I consider him safe to follow in many things. It will not do for a bee-man, any more than a business man, to "lose his head" and follow any one blindly, but use judgment in all things.

T. F. KINSEL.
Shiloh, O., Aug. 4, 1890.

Expects a Fall Crop.

The honey crop for 1890, in this section of country, will be very light—white clover did not yield one drop, and from apple bloom to linden flow many colonies were in a starving condition; but the basswood flow was fair, and weak colonies have recruited in numbers, and active breeding continues: but new swarms were few, except those which were in first-class condition in early spring. Many colonies are killing off drones. The late rains seem to have a reviving effect on nature, with a prospect of a fair fall honey crop. Reports from German bee-papers regarding honey crops are encouraging.

STEPHEN ROESE.
Maiden Rock, Wis., Aug. 4, 1890.

HONEY AND BEESWAX MARKET.

KANSAS CITY, Aug. 9.—The receipts of comb and extracted honey are very light; demand for comb is good at 14@15c for white 1-lbs.; dark 1-lbs., 12@13c. Very little demand for extracted yet. Beeswax, 22@25c.

CHICAGO, Aug. 9.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 14@15c; 2-lbs., 12½@13c; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, August 6.—Demand is good for the new crop, and receipts are very light. White 1-lbs., 15c.; 2-lbs., 13@14c. Dark 1-lbs. 12@13c.: 2-lbs., 12c. Extracted, white, 7c.: dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

KANSAS CITY, July 15.—The receipts of new comb honey are light, and demand equal to the receipts. One-pound white comb is selling at 14@15c. Very little demand for extracted at present. Beeswax, 25c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6½c. Beeswax, 28@30c.

A. V. BISHOP, 142 W. Water St.

DENVER, Aug. 7.—Old honey all gone. New crop is arriving freely. Prospect good for a fall crop. We quote: 1-lbs., 14@16c. Extracted, 6@8c. Beeswax, 20@25c.

J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, July 23.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
51D26t 1m1y.

◆

☞ The Cortland Union Bee-Keepers' Association, will hold their Annual Basket Picnic at the Floral Trout Park, in Cortland, N. Y., Tuesday, Aug. 19, 1890. Essays will be in order. All come.
M. H. FAIRBANKS, Sec.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890.
D. A. FULLER, Sec.

Advertisements.

WISHING to change all my Bees to 5-BANDED GOLDEN ITALIANS, I offer 25 Tested and 10 Untested Italian (3-banded) Queens at 50 cts. each. Some show the 4th band—good, serviceable Queens. Send now; don't wait.
JACOB T. TIMPE,
33A1t Grand Ledge, Mich.
Mention the American Bee Journal.

GOLDEN ITALIAN QUEENS BY RETURN MAIL. See last week's Journal for prices. Address,
29Dtf JAS. F. WOOD, North Prescott, Mass.
Mention the American Bee Journal.

American Carniolans, From two finest Home-Bred Colonies—only one swarmed this season. Very gentle, good honey-gatherers. Dry weather disposed of drones near me. Select Untested Queens, $1.00. Safe arrival guaranteed.
32A4t E. F. QUIGLEY, Unionville, Mo.

NOW FULLY TESTED A SUCCESS!

The New Dibbern Bee-Escape.

THE NEW BEE-ESCAPE has now been fully tested, and recently greatly improved. I now offer them for sale, by mail, 35c. for sample, or $3.00 per dozen. Complete Boards, 60c. or $5.00 per dozen by express.
33A2t **C. H. DIBBERN, Milan, Ills.**
Mention the American Bee Journal.

HONEY

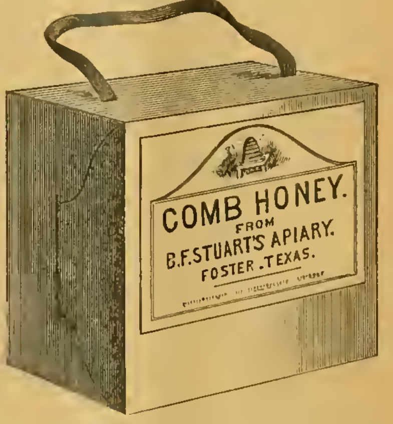
WE are now ready to receive shipments of **HONEY**, and would be pleased to open correspondence. Liberal advances made on consignments. Prompt returns. Quick shipments of **Comb and Extracted** will meet an active market. Reference on file with the American Bee Journal.
S. T. FISH & CO., 189 So. Water St.,
33A20t CHICAGO, ILLS.
Mention the American Bee Journal.

Folding Paste-Board Box

FOR COMB HONEY.

IT HOLDS A SECTION of Comb Honey, preserving it from dust and dirt in a Store, and the "red-tape" handle makes it convenient for the purchaser to carry it home.

The label shown on the Box, is our "No. 5 Gummed Label," but any of the Gummed Labels can be put on them, by the honey-producer.


COMB HONEY.
FROM
B.F.STUART'S APIARY.
FOSTER .TEXAS.

We can furnish these Folding Boxes for one-pound Sections, 4¼x4¼, for **$1.00** per 100, or **$8.50** per 1,000, by express. The name and address of the honey-producer will be printed on 1,000 or less, for **75** cents extra.

A Job Lot of Folding Boxes, which will hold Sections 5x5 inches, or less, will be sold at **only 80 cents per 100.** ORDER EARLY to get these, as the supply is limited.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.
Mention the American Bee Journal.

Choicest Italian QUEENS! **Purely** BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf
Mention the American Bee Journal.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

For Shippers and Retailers.

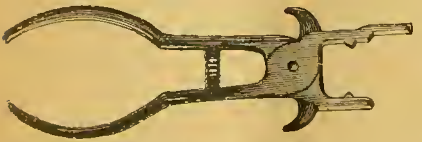
All boxes printed with your Business Card on front if desired.

Samples and Prices on application.

MUNSON & CO.,
30A13t New Haven, Conn.

Mention the American Bee Journal.

Jones' Frame Pliers.



FOR taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, 40 cents., by mail. By express, 30 cents.

THOS. G. NEWMAN & SON,
246 East Madison St., CHICAGO, ILL.

CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin	$ .40	$1.00	$ 1.75
" Untested	1.00	2.75	5.00
" Tested	1.50	3.75	7.00
" Select Tested,	2.00	6.00	10.00

Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.

Mention the American Bee Journal.

FOR TRUE-BLOOD CARNIOLANS

SEE our Advertisement in July 5th Number of this Paper—page 462.

J. B. MASON & SONS,
31Atf MECHANIC FALLS, ME.

Mention the American Bee Journal.

SHORT-HAND

YOU can earn $75.00 per month as a short-hand writer. Learn at home. Address,

S. A. MORAN, Ann Arbor, Michigan,
FOR FULL PARTICULARS.
32A2t **IT WILL PAY YOU.**

Mention the American Bee Journal.

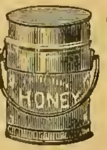
Voice of Masonry and Family Magazine.

Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine Portraits and Illustrations, and a great variety of articles, stories and poems for Freemasons and their families; also Eastern Star, Masonic Gleanings and Editorial Departments. Price per year, $3.00.

JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.

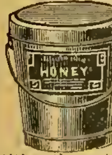
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

HANDLING BEES

A **PAMPHLET**, treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

HOME EMPLOYMENT. AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper. *Big Cash Premiums.* Sample FREE.
THOS. G. NEWMAN & SON,
923 & 925 West Madison-Street, - CHICAGO, ILLS.

QUEENS! QUEENS! QUEENS!

By Return Mail.

AS **FINE A LOT** as was ever reared, at the following low rates—purity and safe arrival guaranteed:

Tested, each	$1.50
Warranted, each	1.00
" per dozen	9.00
Untested, each	.75
" per dozen	8.00

Will state that these Queens are all reared from our best honey-gathering strains, in full colonies. We are one of the oldest and largest breeders in America. Give us a trial order.

Address,

W. W. CARY, - COLERAINE, MASS.

Please Mention the American Bee Journal.
31Atf

Illustrated HOME JOURNAL

An Elegant Monthly for the

FAMILY AND FIRESIDE,

At $1.00 a Year.

Printed in the highest style of the art, and profusely embellished with Magnificent and costly Engravings.

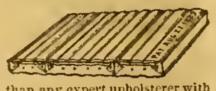
THOMAS G. NEWMAN AND SON,
PUBLISHERS
CHICAGO, ILLS.

It is a moral and intellectual educator, and is invaluable in every library, as well as a very attractive and inspiring ornament in every drawing-room. Each issue contains 36 pages.

Its historical and biographical sketches, as well as its stories, are charming; its departments for the Young Folks, the Household, and the Family Circle are very interesting, and all who examine it are sure to become regular subscribers. It captivates them all.

A Sample Copy will be sent free, upon application to the publishers.

The **ILLUSTRATED HOME JOURNAL** will be clubbed with the American Bee Journal and both mailed to any address in the United States and Canada, for one year, for **$1.60.**



SEND for prices of the Empty Eureka Mattress Cases. A child can fill one with any filling in a few minutes without ripping or sewing a stitch of seam and make a smoother mattress than any expert upholsterer with the old style. It is the only case which keeps its perfect form when filled with feathers. They are filled from either edge, into twelve compartments, extending the entire width of the case and the edges are closed up by means of eyelets and lacing cords. No tacking required The most beautiful and convenient case made. Health and cleanliness require that all mattresses be renovated. The Eureka is the only means by which you can do it. Eureka Mattress Co., Franklin Grove, Ill.
33A1t

Mention the American Bee Journal.

The Honey Almanac

JUST the thing needed to create a demand for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Aug. 23, 1890. No. 34.

EDITORIAL BUZZINGS.

Bee-Keepers' Day at the Detroit Fair and Exposition is to be on Friday, Aug. 29, 1890. As first suggested by friend Hutchinson, it was to have been on Tuesday of the next week, but this has been deemed too late by those who have the matter in charge, and now it is settled for Friday. We hope to meet our many friends and have a grand re-union on Friday, the 29th inst.

* * *

Not Honey only, but the crops generally are not prospering. The cause is the abnormally high temperature, with an insufficient rainfall. One factor in the blighting of vegetation has evidently been the hot winds that have scorched it, from one end of the continent to the other. These have also dried up the nectar so that nothing was left for the the bees to gather. The honey crop is therefore a very light one, and the prices must go up.

* * *

Golden-Rod.—Mrs. B. A. Manley, of Milo, Iowa, on Aug. 11, 1890, sent us a flower, requesting us to give its correct name. It is *solidago*—commonly called golden-rod—and usually gives abundance of honey. It blooms early in August, and the bees work on its yellow plumes until frost and cold weather confine them to their hives. It yields amber-colered honey of excellent flavor.

* * *

A South Carolina Darky recently hitched his mule, with a bale of hay on its back, near a neighbor's bees, which were about to swarm. The bees came forth, and settled on the bale of hay, after which the Darky drove the mule home, and hived the swarm of bees.

Those Horrid Bees.—Under this heading, the *News* of Miami, Mo., on July 19, 1890, accused the bees of that city in the following bombastic way :

> Now that the first fruits are beginning to ripen, the citizens of Miami are beginning to find out how very troublesome and annoying the bees are, to say nothing of the damage the little pets can do the fruit.
>
> When the first warm days of spring came, and the bees cames out in numbers, we then predicted that they would prove to be a nuisance, and we have no reason to change our opinion.
>
> They not only destroy the fruit, sting old and young alike, but the housewife who takes her preserving kettle to the porch, or yard, is compelled to divide her time between fighting the bees and attending to her preserves.
>
> Our grocery merchants are also greatly troubled by the pests that swarm in the cellar and upon the fruit they have exposed for sale.
>
> Again, we say, the *bees are a nuisance ;* and further say, that it is a shame that *so many* people should be made to suffer inconvenience and losses for the benefit of *so few.*
>
> The City Council should take immediate steps to have the nuisance abated, and if they have any doubts about what the people think of it, they have only to ask, and they will find that nearly every citizen believes as we do, especially the ladies. Do not wait until greater damage is done, but act now.

All this is aimed at one of our lady bee-keepers, who resides there—Mrs. J. M. Null, who is a member of the National Bee-Keepers' Union.

The lady wrote to the Manager of the Union that the editor of the *News* (who is also the Mayor of the city), is trying to array her neighbors against the bees out of "pure meanness," and without the least provocation — there being no complaint from any one of the bees being troublesome.

The Union has taken steps to defend the bees and their lady bee-keeper, and will see to it that *malice* and meanness shall not prevail.

* * *

Are you Going to the Fair ? If so, will you kindly send to this office and get a few samples of the Bee Journal, and give them out to your friends there, and get up a club ? We will send them to you with pleasure.

* * *

Feed the Bees where they have no honey, and none is to be obtained by the bees in the fields. Do not let the bees starve just because they are temporarily out of honey. Look ahead, and make provision for the good times yet to come.

* * *

The Fall Crop of Honey is yet an unknown quantity, but the prospects now are that it may be considerable of a crop. Some of the best fall crops of honey we ever heard of followed a dry summer.

* * *

Shade the Hives if the sun shines on them intensely hot. Unless this is done the combs may melt down.

Honey Mine !—A correspondent asks about a wonderful " Mine of Honey " found in Kentucky, thus :

> The bees are on a strike. They will not gather any more honey then will feed them this winter. The following is clipped from a Chicago paper :
>
> " A well-borer named Starks has drilled a three-inch hole into a cliff on the Cumberland river, near Franklin, Ky., and at the depth of 85 feet struck a mine of honey. Since the strike was made, tons of the sweet have been pumped out and shipped to Louisville."
>
> This explains the matter clearly ; the bees cannot compete with that way of getting honey. If that is not stopped, it will ruin the business entirely.—H. T. Applegate, Scotch Grove, Iowa.

The papers now-a-days are full of such items about honey in the rocks, etc., but this beats them all. Honey found at the depth of 85 feet below the surface and enclosed in a solid rock ! ! Wonderful ! What kind of bees was it that gathered the honey ? Where did they get the honey—without plants, trees or shrubs ? Prodigious yarn ! Humbug ! Lies !

It should make the newspaper scribblers *blush* to write such foolish sensational stories, expecting any one to believe them.

* * *

Wind-Breaks for the Apiary.—An exchange contains the following paragraph about constructing wind-breaks for bees in winter :

> Wind-breaks around the bees during winter are very beneficial, and it will pay well to erect high board-fences for this purpose. These may be temporary, and may be removed in the spring. We have known farmers who keep a few colonies who would move their bees and set them against some building when winter came, to protect them from the cold wind. This won't do at all. The bees must not be moved to a new location, for on the first warm day they come out they will go back to the old place and become lost, and never find their hives again ; thus the colonies are badly weakened. Fix them up where they stand, and never move them at such a time unless you place them in the cellar or something of that kind. Never wait until cold weather before fixing up the bees.

* * *

In England the honey crop is a failure, but from just the opposite cause of its failure in America. Here it was hot and dry. There the sun refused to shine, and rain has been incessant. In our case the sun dried up the nectar. In England, the rains washed out what little there was.

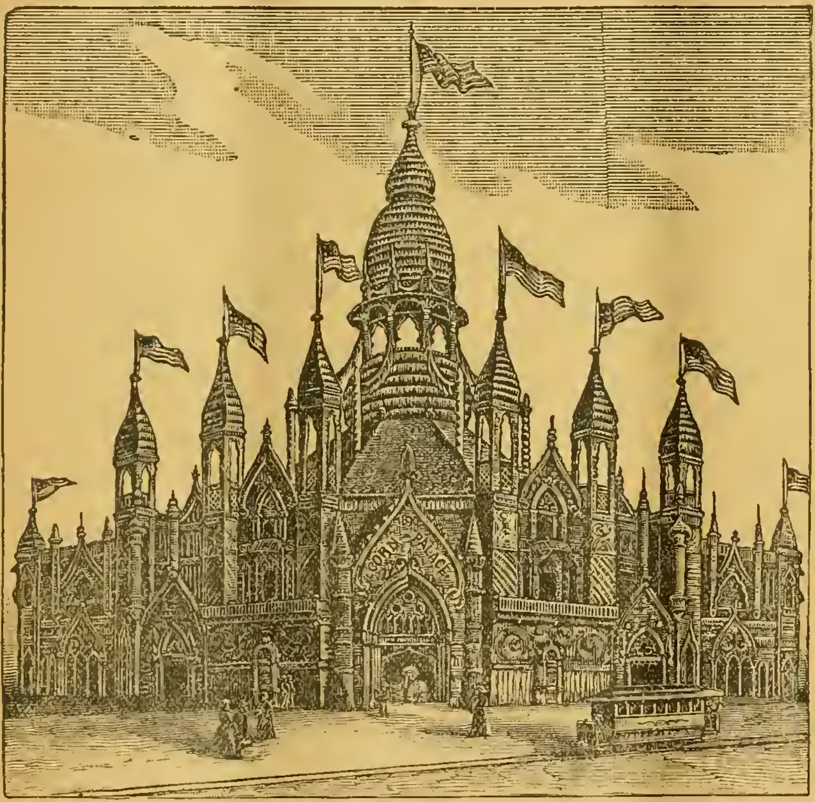
* * *

Trial Subscribers.—In order to get as many as possible to read the American Bee Journal, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

Sioux City, Iowa, Corn Palace.

The plans adopted for this year's Corn Palace at Sioux City, Iowa, are simply marvelous, far exceeding anything heretofore attempted by the enterprising citizens of the famous "Corn State."

We are pleased to be able to place before our readers a representation of the palace dedicated to "King Corn," for the year 1890. It is a marvel of beauty, and a very pleasing surprise to even those who gazed upon the wondrous handiwork formed from the fruits of nature at the festivals of former years.



Sioux City Corn Palace.—Opens Sept. 25; closes Oct. 11, 1890.

Besides the exhibition of the many agricultural productions for which that portion of Iowa is noted, a "Corn Palace Pageant," has been arranged for, to be superintended by Francois Dubois, the French artist who has also been secured to prepare the attractions for the Mardi Gras in New Orleans next year. The Sioux City pageant promises to be the most unique, novel and dazzling ever witnessed outside of the Mardi Gras city.

The date this year for the opening is Sept. 25, and the festival will continue until Oct. 11. The Corn Palace will cover an area of 264 feet square, which is twice as large as that of last year. The structure is of Arabic design, and resembles in general outline pictures of some of the famous Turkish mosques. The center of the building closes in an immense dome, from which rises a substantial tower 170 ft. high. On each side of this central tower will be two smaller ones, located on the turrets, and heavy festoons of grain will be hung from the smaller ones to the central tower.

The arrangement of the interior is where the architect has given full sway to his novel ideas. The main building will be octagon in shape, with a diameter of 166 feet. Around the room, at a height of 32 feet, will run a balcony, supported on pillars. These pillars will be so arranged, however, that a clear passageway 50 feet wide will be left from the entrance, giving an unobstructed view for a distance of 272 feet. At the end of the passage will be arranged an immense waterfall, and other attractive features, that with the great distance, will naturally impress the visitor as he steps inside with the immensity of the structure.

The central building will be so arranged that the light will be excluded. The ceiling will be formed of a painted sky on canvas, arched over. From the ceiling will be suspended innumerable incandescent lights in globes cast in the shape of stars, which will produce an effect as startling as it will be beautiful.

To the right of the central building is the auditorium, a room 100x100, which is an entirely new feature of this year's Palace. This room will be furnished with seats, so that those who are tired of the crowd in the main building, can seek rest and musical entertainment in the auditorium. On the north and east sides will be large rooms for exhibits, and space will also be allowed for this purpose in the gallery of the central building.

It is the intention, in addition to the general plans, to have as many attractive features as possible, that are both novel and unique. The decorations will surpass anything of the kind ever witnessed before.

The committees in charge of the work, have the details arranged, and this year's Palace will prove such a panorama of unique novelties and natural beauty that no one can afford to miss seeing it.

Intruders Under the Bed.

A letter in *Gleanings* from Shaowu, China, gives the following very interesting account of an experience in the Celestial Kingdom :

One very common way in which the people in this particular corner of the world have of building their one-story or story and a half houses, is as follows :

A foundation of cobble stones having been laid where the side-walls are to stand, and perhaps also where the back of the house is to be, two broad planks are fastened on their edges between upright poles set in the ground, on each side of the foundation, and damp earth is put between them and pounded down hard. The planks are then raised one course higher, fixed firmly in place, and then more earth put in and stamped down, and so on until a depth of 10 feet or so is attained. Then a wood frame is put up inside of these walls.

If the house is designed for a shop or a store, the whole front consists of movable boards sliding in grooved pieces on top and bottom. This is the general plan on which many a Chinese inn is built.

To economize space, the tavern keeper generally has a box-bed for his own use. This consists of two boxes, each one about 3x3½ feet in length and breadth, and 2½ feet or more high. These two boxes, set side by side, make as good a bedstead as most Chinamen have.

I was resting in front of a tavern one day last February, when I observed a string of bees pouring in and out through a crack between the corner post and the earth wall on my right. Through the obligingness of the landlady, I was enabled to investigate matters. There in that corner of the building stood one of these box-beds. Rats had gnawed a hole in the lower corner of the box at the bottom, close by the crack, and through this crack and rat-hole the bees had come in and taken possession of the box. The landlady told me that they came of themselves in the previous May, and that she cut out their stores last fall. They had nearly half a bushel of pure white comb partly filled with clear white honey.

Rape, which is much cultivated here as a winter-spring crop for making rape-seed oil, was just coming into bloom, and the bees were doubtless at work on this. In fact, ten days of mild weather had started a number of wild plants to blooming, and the bees were booming. Chinese bees always seem very docile. Rape honey is said not to be equal in flavor to tea honey. The tea-plant blooms in December.

The Bee-Maidens of France.

Harper's Young People some time since contained the following interesting account of what are known in France as the "bee-maidens." Their work, and how they came to receive their prety name, is described thus:

> Near the little town of La Ferte, in France, there is an apple-tree which bears only imperfect blossoms; and the fact having long, long ago been discovered, has given rise to a very beautiful custom among the maidens of the village.
>
> When spring-time comes, and the apple-tree hails the joyous time with a glad burst of blossoms, the maidens of the village arm themselves with gay ribbons and perfect blossoms from their favorite trees, and go singing to the lonely tree which has produced only the imperfect blossoms. Each girl then kisses a cluster of the imperfect blossoms, and in so doing dusts the former with the pollen from the latter. She then ties a distinguishing ribbon near to the cluster she has dusted.
>
> The tree looks very gay when thus decorated, with the pink blossoms smiling up at heaven, and the dainty ribbons fluttering in the perfume-laden air; but the best of it is when the petals drop like "summer snow," and the little apples begin to shape. Then the maidens pluck off all but the best fruit, and let that take all the strength of the tree, so that the apples grow famously and come to perfection.
>
> And now is seen the strange part of the affair; the apples, instead of being all of one kind, are as different as the blossoms that kissed their blossoms, the fact being that the apple is exactly like the apple on the tree from which the pollen-bearing blossom was taken.
>
> So on this one tree will be seen round, rosy-cheeked apples, long yellow apples, juicy apples, mealy apples, dainty little apples, and "monstrous big" apples. Each maiden has the apple she wished the most.

In the above is shown that the little French maids perform the duty which the bees usually claim as their portion of the world's work. The reason that bees bury themselves in the flowers and blossoms is that they may extract the precious nectar which they contain, and for the purpose of helping the blossoms to produce their fruitage, which often would not be accomplished were it not for the bees and other insects.

In some cases, if not visited by the bees, the flowers would not live at all; for some flowers are what is called imperfect, and need to be powdered with pollen before they can make any seeds; and the bees carry the pollen from a perfect flower to an imperfect flower, and leave it there while they are thinking only of getting nectar.

If you will catch a bee which has been gathering nectar, you will notice that it is covered over with a fine dust. That dust is the pollen which has clung to the fine hairs on its body.

It often happens with highly cultivated strawberries that they have imperfect flowers, and would not bear a single berry, were they not planted near to some other variety that has perfect flowers. Occasionally it happens to an apple tree, that it bears only imperfect flowers, and then it must either depend upon the nectar-hunting bees, or upon some other agency for the pollen.

Thus it is seen how important it is that bees have access to all the blossoming fruits and plants, as without their valuable aid, the fruit-grower or farmer would often fail to realize anything from his orchard or garden. The great value of bees, aside from the honey which they produce, should not be overlooked.

* * *

Remedy for Mites.—On page 284, Mrs. L. J. Keyes, of Nora Springs, Iowa, asked for a remedy for mites on birds; as none of our correspondents have replied, we offer the following, which we have just found in one of our agricultural exchanges, though these directions apply mainly to mites on chickens:

> After trying sulphur, carbolic acid, kerosene-oil, unslacked lime, etc., about the hen-house, we tried tobacco, and find it the very thing to kill and destroy the mites. A little snuff scattered in the hens' nests, and where the chickens dust, is a deadener to the mite; and if your hen-house is close enough, fill it with tobacco smoke for a few hours, and you can say "good-bye" to the mites. I have been in Texas 42 years, and never saw a mite until this year, and this year they come into our dwelling-houses like fleas, but the snuff and tobacco smoke will settle them.

* * *

Bee-Stings.—Mr. B. T. Marion recommends the application of heat as a cure for bee-stings He says:

> When I am stung I rake the sting off, grab the smoker, give the part stung three or four puffs with the hot air and smoke, and the pain is gone instantly; that is, if I am stung on the wrist. The Bingham smoker is better for the curing of bee-stings than any other smoker I have used. Keep a red-hot fire in the smoker, and you have the best remedy for bee-stings that I know of.

* * *

Alfalfa is certainly a wonderful honey plant, and is attracting great attention from bee-men all over the country. It is not only useful as a honey-plant, but is one of the most important sources of fodder for stock, and, as it is especially adapted to the so-called deserts of the far West, it promises to yield unlimited supplies for bee and beast.—*Field and Farm.*

* * *

Candy for Feeding Bees.—The following recipe for making candy for feeding to bees we find in an exchange; it will serve to answer many who are enquiring in regard to the subject:

> To make candy for feeding bees, put four pounds of granulated white sugar in a pint of water, simmer gently 20 minutes, then pour into buttered pans an inch deep, and cool.

* * *

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

QUERIES and REPLIES.

Best Plants for White Honey and for Fall Honey.

Written for the American Bee Journal

QUERY 725.—1. What, in your locality, do you consider the best honey-plant for white honey, and what is the best for fall honey?—Bell.

White clover.—H. D. CUTTING.

Clover, knot-weeds, Spanish-needle, etc. —DADANT & SON.

1. Basswood. 2. There is no fall honey here.—G. M. DOOLITTLE.

1. White clover. 2. Asters, I think.—R. L. TAYLOR.

1. Clover. 2. Perhaps cucumber for fall.—C. C. MILLER.

1. White clover. 2. Heart's-ease.—C. H. DIBBERN.

1. White clover. 2. Golden-rods and asters.—A. J. COOK.

1. White clover. 2. Asters and heart's-ease.—J. M. SHUCK.

1. White clover. 2. Coreopsis or Spanish-needle.—J. M. HAMBAUGH.

Sweet clover for white honey; and *sweet clover* for fall honey.—A. B. MASON.

1. Sour-wood. 2. Aster is best for fall honey here (East Georgia).—J. P. H. BROWN.

1. White clover. 2. The asters are the best fall honey plants here.—G. L. TINKER.

1. White clover, all the time. 2. The large smart-weed, and the little white aster. Golden-rod is "no good."—G. W. DEMAREE.

My own locality is a poor one for honey, still white clover leads for summer, and golden-rod for fall. I get no white honey in the fall.—J. E. POND.

1. Basswood. 2. The yellow flowers that bloom in August and September. Buckwheat is perhaps the most useful plant for fall honey.—EUGENE SECOR.

1. White clover first; sweet clover second; and Alsike clover third. When Alsike is generally introduced by farmers, we think that it will take the first place. 2. For fall honey it varies greatly—no two seasons being alike.—MRS. L. HARRISON.

1. White clover. There is not enough basswood to be of much value. 2. It is difficult to determine what is best for fall honey. Sometimes what is erroneously called heart's-ease (polygonum) is best, and sometimes other fall flowers are better. Golden-rod is worthless except once in about a dozen years.—M. MAHIN.

1. In my locality, basswood rather exceeds white clover in quantity, and is probably about equal in quality, the two being our main sources. 2. Buckwheat, boneset, and golden-rod are the three principal sources of fall honey, or, in other words, "August honey," commonly called "fall honey." Sometimes one, and sometimes the other, leads for quantity.—JAS. HEDDON.

* * *

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

CORRESPONDENCE.

CARNIOLANS.

A Criticism of a Report Concerning these Bees.

Written for the American Bee Journal
BY C. J. ROBINSON.

On page 488, Mr. S. A. Shuck essays to compare Carniolan bees with such as *he* calls pure Italians. This assertion, though strictly correct, is fraught with suspicion of mistake. Even had he named the breeder who selected and tested his Carniolan queen, there appears, on the face of his story, reasons for suspecting that some of the parties interested were ingloriously fooled. As his account shows, it is more than probable he did not, in fact, "purchase" a queen that was a straight lineal descendant of the Carniolan race of bees.

He mentions that "every one of the young queens mated with Italian stock." Hence he was not in possession of Carniolan "stock" other than the queen purchased. He credits the Carniolans with being superior compared with blacks in certain points—"gentleness, and a disposition to stick to their combs while being handled." This much he is competent witness, but his other comparisons in the matter seem to be conclusions based on uncertainties.

Mr. Shuck says: "The old queen swarmed twice" during the season (June, July and August). If, under ordinary circumstances, the old queen (the so-called tested Carniolan) became the own mother of three swarms during that brief season, it is certain she was a No. 1 queen. Queens are the main-spring of colonies. If she is not normally fruitful, the bee-master cannot, by any means, make a colony prosperous, but he may easily control the limits of the brood as desired when the over-breeding of a queen demands it.

He alludes to his "pure Italians"—but he left out the most important part of the information desired by his readers, to-wit: How does he find it possible to keep *pure* Italians where all of his virgin queens (Carniolans) mated with Italian stock?

Well, he began the present season with 125 colonies. Twenty-five of these "had Carniolan queens" (how call, or represent, these Carniolan queens when, as he asserts, every one of the Carniolan virgins mated with Italian stock?) Then he mentions that about 20 per cent. of his virgin Italian queens mated mostly with Carniolan stock. He also compares black bees in his trial test, so it seems he was badly mixed.

Mr. Shuck mentions that he obtained a certain amount of honey from this, that, and other colonies, but fails to mention anything concerning the conditions of the respective colonies, which is all-important, if the colonies are entered in the trial test. The difference he gives of the amount of honey taken from the colonies respectively, shows no greater discrepancy than is probable in any lot of colonies worked in a similar way.

Please note his pitiful conclusion: "I think, now, that I shall be over 1,000 pounds short for the season, by having Carniolans instead" (?)—that is, just because in 1889 he purchased what he calls a Carniolan queen, put her into a colony and "superseded" her in the fall—he, on July 2, 1890, would fain have it understood that he is doomed to lose 1,000 pounds of honey! He ostensibly gives the figures as a warning, or, as he puts it "a hint."

Whatever was his aim, or however he wishes us to construe his hint, it is plain that Mr. Shuck is prejudiced bitterly against Carniolan bees, and that, too, without cause, judging from his writings. Such groundless attempts to disparagement is fraught with danger to readers. Fair play and consistency are the jewels, and they ought to be heeded even by competitors.

Richford, N. Y.

HISTORIC.

Some of the Curious Uses Made of Honey.

Written for the Australasian Bee Journal
BY T. J. MULVANY.

Honey appears to have been used from very early times, in religious ceremonies and in connection with funeral rites.

In "Rollin's Ancient History" (vol. i. Introduction) the following passage occurs in reference to some of the oracles of ancient Greece:

"The oracles of Trophonius in Bœotia, though he was a mere hero, were in great reputation. After many preliminary ceremonies, as washing in the river, offering sacrifice, drinking a water called Lethe, from its quality of making people forget everything, the votaries went down into his cave, by small ladders, though a very narrow passage. At the bottom was another little cavern of which the entrance was very small. There they lay down upon the ground, with a certain composition of honey in each hand, which they were indispensably obliged to carry with them."

From another passage we find that "it was the Spartan custom to cover the bodies they would embalm with honey," and failing to secure a supply as in the case of King Agesilaus, who died in Africa, they "made use of wax in its stead."

We have seen also, from an allusion in the Koran (quoted in a former paper) that before Mahomet's time, "the Arabs used to anoint the images of their gods with some odoriferous composition, and with honey."

The early Christians, it would seem, in the second century, used milk and honey in the administration of baptism. The following extracts upon this point are from "Mosheim's Ecclesiastical History" (Maclaine's translation):

"Thus they administered milk and honey, which was the ordinary food of infants, to such as were newly received into the church, showing them by this sign that by baptism they were born again, and were bound to manifest the simplicity and innocence of infants in their lives and conversion."—Vol. I. page 205.

"After baptism they received the sign of the cross, were anointed, and by prayers and imposition of hands were solemnly commended to the mercy of God, and dedicated to His service, in consequence of which they received milk and honey, which completed the ceremony." — Note, see "Tertullian on Baptism," Vol. I. page 211.

A curious instance of the use of honey in the preparation of a condensed form of food for men in danger of starvation, is mentioned by Rollin, in the account of the siege of small island of Sphacteria, opposite the town of Pylus, in Messenia, during the Peleponnesian war (B. C. 426).

"The Athenians continued to keep strict guard around the island to prevent any provisions from being brought into it, and hoped that they should soon be able to starve out the inhabitants. But the Lacedonians engaged the whole country in their interest by the views of gain, laying a heavy tax upon provisions, and giving such slaves their freedom as should bring any into it. Provisions were therefore now brought at the hazard of men's lives from all parts of Peleponnesus. There were even divers who swarm from the coast to the island, opposite to the harbor, and drew after them goats'-skins filled with pounded linseed and poppies mixed with honey."

Gibbon, in his "Decline and Fall of the Roman Empire," mentions a circumstance which tends to show that in the seventh century honey formed an important item in the commissariat stores of Eastern armies. Relating a story of the great battle of Nehavend (A. D. 651), in which the conquest of Persia by the Saracen Caliph was completed, he says: "If it be true that the flying general of the Persians was stopped and overtaken in a crowd of mules, and camels laden with honey, the incident, however slight or singular, will denote the luxurious impedimenta of an Oriental army."

About the same period he relates an occurrence in which honey was used to conceal a treasure of golden coin. The Greek Emperor Heraclius raised a forced loan from the churches of Constantinople to meet war expenses, and on that occasion barrels of honey (ostensibly) which were packed away among the church stores, were found to be really filled with gold coins. It would appear as if some attempt was made to represent this as a miracle, for he adds in a note: "Basonius gravely relates this discovery, or rather transmutation of barrels, not of honey, but of gold." The anecdote is of interest to us as showing the extensive use of honey, and the manner in which it was usual to store it at that period.

We may suppose that only a certain proportion of gold coin was mixed with and covered by the honey in this case, and that the honey was crystallized in the barrels, in which view of the matter the mode of concealment must be admitted to have been ingenious and likely to pass muster. Had the barrels been simply filled with gold coins instead of honey, the deception would have been easily betrayed by the great weight, and by the jingle of the coins upon moving the barrel.

Some remarkable cases are recorded in history of the use of honey in Eastern countries, as a means of torture under circumstances of great cruelty. One such case occurred in the fifth century before, and another in the fourth century after, the Christian era.

The first is related by Rollin in his account of the reign of the Persian monarch Artaxerxes, the son of Xerxes (B. C. 473), as follows:

"Artaxerxes having at last entirely defeated his enemies, put to death all who had engaged in this conspiracy. He took exemplary vengeance of those who were concerned in his father's murder, and particularly of Mithridates, the eunuch, who had betrayed him, and who was executed in the following manner: He was laid on his back in a kind of a horse-trough, and strongly fastened to the four corners of it. Every part of him except his head, his hands and his feet, which came out at holes made for that purpose, was covered with another trough. In this horrid situation victuals were given him from time to time; and in case of his refusal to eat, they were forced down his throat; honey mixed with milk was given him to drink, and all his face was smeared with it, which by that means attracted a numberless multitude of flies, especially as he was perpetually exposed to the scorching rays of the sun......The criminal lived 15 or 20 days in inexpressible torment."

The other case is mentioned by Gibbon, in the reign of Julian the Apostate (A. D. 362), where he describes the persecution exercised by the magistrates acting under Julian's orders, upon Mark, Bishop of Arethusa, in revenge for the zeal he had exhibited in the destruction of heathen temples during the preceding reign. "They apprehended the aged prelate, they inhumanely scourged him, they tore his beard; and his naked body, anointed with honey, was suspended in a net, between heaven and earth, and exposed to the stings of insects, and the rage of a Syrian sun."

These are not likely to have been isolated cases of refined cruelty, and it is only too probable that both in ancient and in comparatively modern times, the occasions may not have been very rare when the "heaven-sent gift" of honey may have been abused in the same vile manner.

◆

KILLING BEES

In Order to Secure their Honey and Wax.

Written for the American Bee Journal

BY REV. STEPHEN ROESE.

To kill bees for their honey and wax in this enlightened age of the world, where modern improvements, with movable frames and hives, furnish every possible way and means to obtain the same without such barbaric conduct, is a crime against apiculture, which every intelligent man and woman in the bee-keeping ranks of this age condemns; and bee-keepers practicing such, are unworthy to bear this honorable name, nor should they be recognized as partakers and members of this industry.

As early as 1508, Jacob Nicol, in his work on the right and wrong way of bee-keeping, severely condemns the practice of brimstoning bees for their honey and wax; and the late Francis Huber denounced such conduct as barbaric, cruel, and void of human feelings, unworthy to be countenanced by progressive apiculturists of this age of the world; and adds, further, that those doing such, lack good sense and judgment, and sound reasoning power, for modern improvements, with movable frames, have made bee-keeping so plain that a child can understand it, and handle bees successfully for both profit and pleasure, securing larger quantities of honey by means of the extractor, free from pollen flavor, and more marketable, and stimulating bees to activity.

Who on earth, Huber continues, ever heard of a man killing his milk cow to get the milk? or sheep, to get the wool? or the hens to get the eggs? What man would kill his horse because feed in the barn is scant, but plentiful in the market to be had for money. Bee-keepers killing their bees for the honey and wax, are not bee-keepers, but bee-murderers, and should be branded with a black mark.

The man who from a spirit of covetousness kills a man for his money, which he has not earned, is one void of all human feelings, with a conscience hardened by such deeds. Civilized communities condemn such acts, and mark them as evil-doers, and justly so. Who has a right to take life which he cannot give. God created all things for the benefit of man, but not for man to kill or destroy.

The industrious bee labors and toils during the season, harming no one; but the enemies of this energetic insect are many; we hear of bears, skunks, and the like, robbing and killing bees, and the bees' friend—the apiarist—becomes enraged, because of his feelings and sympathy for his pets; and for such pests to be dealt with an "eye for eye," or "tooth for tooth," should be no unjust rule. But what shall we say of men bee-killers, who claim to stand on a level with intelligent and civilized races of creatures—the masterpiece and crowning work of Creation. Old fogyism, who killed the cow to get the milk, by close self-examination—lifting the curtain—they would get a glimps of their company, and a sight of the level on which they stand.

Maiden Rock, Wis.

◆

CALIFORNIA.

The Hot Wave Dried up the Nectar in the Flowers.

Written for the Rural Californian

BY C. N. WILSON.

There is no room for a question that the honey crop of 1890 in Southern California is about all gathered; while a large yield was obtained in some localities, in others not much over half an average crop was obtained.

It was supposed by most persons interested in the business of bee-keeping that 1890 would give an unprecedented yield of honey, and the copious rains of the late months of 1889, and January, February and March of 1890, gave good grounds for the supposition.

But it is not rain alone that gives us flowers and nectar; a warm, damp atmosphere must surround the bloom to produce the best results as a secretion of nectar.

Hot winds will kill the bloom on many shrubs and plants and dry up the nectar in the bloom of any tree. Even the bloom of the blue-gum yields to a north wind or a hot wave from the desert.

Hot or north winds have been so prevalent during the latter part of June, and so far in July, that in some places bees have quit storing honey, and are now consuming their stores. In such places the season is ended.

WHAT WE KNOW.

The quality of honey produced this year in Southern California is equal to any in this locality since 1876, both as to flavor, body and color. Much of it is bright as a ray of light seen through a dew-drop.

Spider-webs ought to be brushed off bee-hives to prevent the bees being caught in the webs, and that an old broom is a good thing to use to do the work with. A whitewash made of one part of Portland cement to five parts of air-slacked lime, and a little salt mixed with cold water and made quite thin, is as good or better than paint for old bee-hives; it will fill up cracks, and kill the larva of bee-moth, and look as white as the best paint. It can be applied rapidly with an old broom with the handle cut off, so as not to interfere with rapid work.

WHAT WE HEAR.

That the honey supply in the San Francisco market is greater than the demand; that but little honey is changing hands in San Francisco on account of the large supply of berries and fruit.

The yield of honey in most of the Eastern States is very small—in some places an entire failure.

San Diego county has produced this season, so far, more honey than was produced in the whole season of last year, and this year's honey is of much better color and quality than that produced last year.

Several parties are preparing to establish apiaries in Arizona.

Carniolan bees have made a good record this year as honey-gatherers.

WHAT WE WOULD LIKE.

To have the bee-keepers of the Sixth Congressional District meet in convention and form an association for mutual benefit to fix prices for honey, to grade honey, to obtain reduced rates as to freight, both by land and water; to get exact information as to the best markets, both in the Eastern States and foreign countries; to get information exact and reliable as to where the best supplies, hives, sections and apiarian appliances can be obtained; to have this convention meet before the meeting of our State Legislature, and see if some measures cannot be taken to effectually enforce the law relating to foul brood among bees; and that the law be made uniform as to the assessed value of bees; to know that California bee-keepers were getting a fair price, six cents a pound, for good sage honey.

BEE-ESCAPES.

Their Invention and Perfection for General Use.

Written for the American Bee Journal
BY C. H. DIBBERN.

Mr. Reese has very fairly described, on page 507, my original horizontal bee-escape, but *now* claims that it is old, and the invention of others. Now let us see what Mr. Reese thought about this, at the time I sent him the diagram. Mr. R. says, in his letter of Nov. 20, 1889, in regard to the original escape, which he now says is old, and was well known:

> Your escape will work like a charm; the application of the principle is novel, and if you will publish it now, you will do the right thing, in my judgment, and have *undisputed priority.* Bring it out now; if you wait five years, you may change the arrangement but a little, and probably not improve, as the principle is well established, as a number of parties, including myself, have it applied to doors and windows of honey-houses.
>
> Your application of it, in a *horizontal* position on hives *is certainly novel with you.* I had thought of using the principle in an empty T super, in a *perpendicular* position instead of the cones, but could not see any advantage over the cones, *but I had never thought of using the horizontal plan.*

Some of the above italics are my own. If Mr. Reese had readily thought the diagram sent him, old, and of no account, he would hardly have written all the above.

Now let us see what Mr. Reese really claims: He has admitted that I invented the horizontal escape, even an improvement antedating his so-called horizontal escape. He has now practically admitted that I first invented a *horizontal* escape, and that it was placed *inside the space*, usually occupied by the board.

Now, what Mr. R. really did do, was to take my second published pattern (figure 4) and place it in a board on the plan of my original escape, described on page 507. It certainly does not require any great inventive genius to make the escape a little different, and nail it into a board, a little differently, and call it an original invention! I want to ask bee-keepers in general, and Mr. Reese in particular, if it is entirely fair to use my designs and principles, which are not disputed, in an escape, and call it by their own name? I agree with Mr. R., that this ought to settle it!

But Mr. Reese nor any of the numerous bee-escape inventors have yet learned all the kinks necessary to a perfect bee-escape. It is true that most of them will work under favorable conditions, but what bee-keepers want, and must have, is one that never fails. Of course, no escape can ever be expected to work if there is brood, and perhaps a queen in the supers.

Mr. Reese says, in an article in a late number of the *Review*: "I would think the escape a good thing if it would only clear out two-thirds of the bees in 24 hours." Well, now! if I had nothing better than that, I think I should throw it way, and go back to the old smoke-out plan! Wouldn't you?

Now, about using so much smoke in driving bees out of supers: Does it not impart the flavor of *smoked ham* to our fine comb honey, that apparently never leaves it again?

I have no objection to any bee-keepers making and using any of my published escapes, or making any improvements, or new ones of their own. Like copying a newspaper article, however, they should give credit for the parts that are copied. I have now perfected the horizontal escape, and have tried it in all reasonable ways, and it has never failed with me, or others, to my knowledge.

Rock Island Co., Ills.

VISITING.

How Some People Keep Bees and Produce Honey.

Written for the American Bee Journal
BY J. W. TEFFT.

During a recent visit I saw at least a thousand colonies of bees, and about fifty bee-keepers, and no two keep bees on the same system—all have different plans.

One, in particular, has kept bees for thirty years, and his father before him for forty years—so he says; he has now 80 colonies in about as many different kinds of hives. I stopped over night with him, and talked "bees." He is a member of the New York State

Bee-Keepers' Association, a writer on the subject of bees, and yet this man never saw a queen, nor a queen-cell, and he could not tell brood from honey. He never examines the brood-nest to see its condition, unless the bees die. His theory is, to put surplus apartments on all the hives, strong in bees or weak, and "let them rip," on Nature's way.

He is looking for swarms—he thinks more of a swarm than of the production of honey. He said that it was abominable how they swarmed last season (meaning astonishing), but this summer he and his wife have sat out under the trees all day watching for swarms. To hear this party talk, one would naturally think that he was scientific.

I asked him to open a hive, to let me see the inside. He went to the house, and got a pail of water, a butcher-knife, hammer and hatchet, and lighted the smoker, which was something like a fish-horn, which he said he gave 25 cents for. Then he went to the house again, and was gone a long time; when he appeared, he had his winter overcoat on, a pair of leather mittens, and his pants tied to his boot-legs with a string; over his hat was a long, white mosquito-netting—he looked like Bancho's ghost.

In his hand was a veil of the same material, which he handed to me, telling me how to put it on, so as to cover my hands. I smiled, and did as he directed. Then he took a ball of twine and tied the netting below my hands, around my body. He went forward almost on tip-toe to the hive, put the smoker to his mouth on the netting, and blew all the smoke he could in at the entrance, which took about five minutes.

I sat down on another hive, and watched with keen interest. He removed the "bonnet" (as he calls the hive-cover), and then the surplus case (Heddon's). With the chisel and hammer he pried up the honey-board, which came up with a snap, and bounded off on the ground. He then blew more smoke, and said to me, "Look and see the inside of the hive;" but I asked him where, as he had not removed a frame. His reply was, "Oh, my! I never move them." But I insisted that he lift one frame out at least, to let me see. He said that he was afraid it would destroy the colony.

After awhile he tried to pry out a frame, but it would not move, as they were glued so fast that the ends ot the top-bars split and broke off, so he quit.

Now, the fun came in; the bees got very mad, and such a time in replacing the honey-board! He said, "Let us go in until the bees quiet down." So we went in, and I left him. I suppose by this time the bees have quieted down.

Now this man sells quite a lot of honey—he says about $200 worth a year; but he does not remove the honey until after it freezes in the fall. I take it that he is afraid of the bees, and dare not go near them until cold weather drives the bees down into the hive. If this is modern bee-keeping, I want none of it; but 90 out of 100 bee-keepers are just like this one, through the country where I have been.

I met with another class of bee-keepers who were dissatisfied with natural life—who want something of closer fellowship—some more special duty to give them ardor for the possible consequences of their work. They are earnest men, and there is no end to their efforts to improve, to impart; and when one end is reached, and its difficulties surmounted, another will quickly present itself to the aspiring spirit; and, before it is reached, another difficulty must be met.

He who is doing the best he can in bee-keeping, is always improving; his best of yesterday is out-done to-day, and his best to-day will be out-done to-morrow. It is this steady progress, no matter from what point it starts, that forms the elements of all greatness and goodness. They think it advisable to put one's heart into whatsoever work one may have to perform; but I think it wisdom to think *well* before putting one's time or money in.

They are the bee-keepers who think existence is not worth having, unless one is struggling with something and trying to overcome it, and they generally are the men who, if they express a fact in bee-papers, an antiquated bee-keeper will arise and say that they must be mistaken.

◆

NORTH CAROLINA.

A Ramble in the Western Part of this State.

Written for the American Bee Journal

BY B. C. GRIFFITH.

In company with a bee-keeping friend, we started for the mountains of Western North Carolina, crossing the historic waters of Catawba river, 12 miles west of Charlotte. We took in all the bee-friends on our route.

The first of any importance was a gentleman near Newton, Catawba county, who has 145 colonies in several apiaries—something to our surprise. He had read but one text-book on apiculture, does not read any bee-papers, never had a smoker—uses a bunch of rags to smoke with—yet without any of the modern improvements, he secured a good crop of honey last year—nearly a ton. He uses the adjustable hive, as patented by Mitchell.

In passing through Gaston, Lincoln, Catawba and Burke counties, we found bees scarce—tons of honey going to waste for the lack of bees to gather it. The above hive, American and Golden, are the only ones in use that have frames. The people of Burke county are so badly "bitten" by the Golden bee-hive that they will not soon recover from its scourge.

We passed through Hickory—a nice little town, situated on a hill overlooking the South Mountain range. It is a beautiful town, and nicely situated for the bee-business, having two railroads crossing at right angles. Leaving this place, we next struck the town of Connelly's Springs—a watering place of some note; taking in the water, and the surroundings, we pronounced it also a good place for bees, judging from what we saw. Sour-wood, sumac—two varieties abound—land is cheap. We were told that sour-wood sometimes yields honey in great profusion, even dropping from the bloom, if struck on the hand.

Our next drive was to Morgantown, the county-seat of Burke county—mostly noted for Golden bee-hives—this was the head-quarters for the agent some years ago. But few bees are kept around Morgantown. One man took considerable stock in the Golden hive, and now has 3 colonies, the result of patent venders.

Our next call was at Glen Alpine Station. This little town, situated on the railroad, is surrounded by the head waters of South Fork river on one side, and South Mountains on the other, giving a splendid outlet for a bee-farm, but still we found no bees to gather up the wasting nectar. At this place we were told that honey-dew fell last winter until the leaves on the ground were wet.

Glen Alpine was as far as we could go, on account of continuous rain. We had gone prepared to hunt bees in the mountains, but were hindered by cloudy and rainy weather. I have no "axe to grind," nor am I a land agent, but it seems to me that if some of our Northern bee-men would go to these cheap lands, they certainly would better their condition. There are large districts of unoccupied land that can be bought cheap—at one dollar to five dollars per acre—that would yield tons of honey, and grapes, apples and other small fruits in great abundance.

On the evening of July 31 we started homeward by another route, scattering copies of bee-papers as opportunity presented, until our supply was exhausted. Reaching home on Aug. 2, we found a swarm of bees hanging on a tree, awaiting our arrival to care for them.

Bees, with us, did poorly until July came in, and since they have been on a boom. If the present prospect holds out, we will have a fair crop of honey. Cotton, peas and buckwheat are our summer crop; later comes sumac, golden-rod, aster, and other fall flowers. The aster especially is a never-failing crop here.

Griffith, N. C., Aug. 4, 1890.

COMB HONEY.

Management of Bees for Comb Honey Production.

Read at a Maine Convention

BY CHAS. A. PRAY.

I have used hives which take both the Simplicity and the Gallup frame. As to the size of the two frames, I could not see any advantage one has over the other, for I used them in bee-houses, which, I think, are far more convenient than out-door hives at present.

All who have handled bees know, or should know, that to get the most honey, we want as many bees as possible at the first honey-flow, and to prevent swarming as much as possible, which this system, in a measure, will overcome. In order to fill our hives with bees, we should see that they have plenty of honey in the hive, in the early spring. We should also stimulate them to brood-rearing by feeding, by some of the many ways familiar to the apiarist.

My Simplicity hives have ten frames. The entrance to the hive is in one corner under the end of the frames, and is six inches long by one-half inch wide. I wish to have the ten frames full of bees and hatching brood at the time of the first honey-flow. My hives were so arranged that when I put on sections, the three frames to one side over the entrance are not covered by the supers. I now remove these other frames and bees enough with them to take care of the brood. These may be placed in an empty hive, with frames from other swarms, and may be given a queen; they will soon be ready for the sections, or they may be kept queenless until after the honey-flow is over, and then be united with the old colonies.

I place frames with narrow strips of foundation in them in the space where I have removed the frames of brood. The bees will naturally begin to draw this foundation out, as the hive is full of brood, and no room for honey. As soon as they have comb enough in these frames, and begin to fill it with honey, I remove these frames, extract the honey from them, cut out the comb, and place the frames back. Now this comb which has been taken from them, I cut in pieces the exact size to fill the section. I use all the comb I get during the season, which will be quite a quantity, by placing it in the sections, and putting them back on the hives, to be mended up and filled with honey for the surplus. If they do not store comb enough in these frames to keep the sections full, use full sheets of foundation by all means.

The principle of this system is, that by having plenty of room above in the sections and at the side, over the entrance in these frames, we can control swarming, and thereby get more honey. I have run 200 colonies this way, with increase of only 5 swarms by natural swarming. This has been my experience in running bees for comb honey in Colorado, by this system, where I have produced 8 tons of honey in one season.

NEW YORK.

Report as to the Season and the Honey Crop.

Written for the American Bee Journal

BY C. V. LINDSEY.

Since I commenced bee-keeping, which was over 40 years ago, I have never spared the time to report my own or my neighbors' crops, but thinking that most of the reports published in bee-papers misstate the amount of this year's crop, also the losses of last winter, I think that never since I commenced reading the reports, which was some 17 years ago, have I felt so inclined towards correcting erroneous statements, especially of city dealers, as at this time.

I receive weekly prices from some of the heaviest dealers in Buffalo, and also from persons in other places, who have learned my address somewhere, as I always stamp all of my No. 1 honey, let it go where it will; and I have spent some time in gathering estimates, as the full and correct amount of the crop cannot be computed, as most bee-keepers have been too busy to harvest (from the hives, I mean) the present crop.

Commencing at home, I have secured more than an average crop; others near here report "light to fair." M. Gillson, the next largest apiarist in town, reports "fair." In towns east of me, N. Huntington, E. L. Eighmy, and Mr. Hurlburt report "light." At Pearl Creek. Mr. Perkins says "fair." Then in Covington, Mr. Newman reports "very light;" in Perry, Mr. Benedict and Mr. Grisewood say "light;" and in Warsaw reports are unfavorable.

Now honey-dealers are misleading their patrons by urging shipments, and telling them the crop is heavy, I think, and it should be corrected.

The most of the above, report winter losses from 10 to 75 per cent., especially those who wintered their bees in cellars. Those who wintered bees out-of-doors, well packed, suffered but little, and the bees came through strong and healthy; but the spring being late and backward, few swarms issued before June 25, that being the date of my first swarm. Then the rush commenced, and continued for three weeks. On July 13, the highest was 14 swarms; and they began to decline, so that on July 18 closed the busiest season I ever experienced, the basswood then being at its best, and all hands started business in earnest.

As I had become discouraged, I started afresh, and my bees filled my "dishes" as fast as I could "set them out," putting on 4,260 sections on June 25, and I continued as fast as other business would allow.

On July 26 I commenced taking off honey, and found as many as 84 sections finished on a few of my best colonies, and 56 on most of the rest, part of them being new swarms, hived on 10 Langstroth frames on old stands.

The prospect for a late crop is good, but I think that the weather has most to do with it, as there may be plenty, and bad weather prevents the bees from securing it. If the heart's-ease and golden-rod yields enough to keep the bees away from honey-dew, or "bug-juice," as some call it, who will mourn?

Last year the late honey was fine, and the hives were filled without feeding when preparing for winter. I shook the bees from the combs of a few uncertain colonies that had yielded no surplus, and extracted the honey, which was very fine.

I packed most of my 122 colonies on the summer stands, putting 29 into the cellar under the living-rooms in the house, on Dec. 12, and put them out on April 16, seemingly as strong as when put in; but, lo! the cold weather proved too much, for most of them dwindled to a handful or two. I doubled some of them to save them, but they never recovered to gather over half as much as those left out.

My 122 colonies were reduced to 121, spring count, but I doubled to 115, then increased to 158, and returned about 100 swarms—some into their own hives, and some into hives casting swarms the day before.

Attica, N. Y., Aug. 11, 1890.

ARIZONA.

Honey - Industry of Salt River Valley.

Written for the Pacific Rural Press
BY GEO. KAY MILLER.

A few years ago, as an experiment, a few colonies of bees were brought to this part of Arizona. Being a success, others followed. All the honey produced brought 8 cents per pound, which soon created quite a demand for bees. As usual, the rage for bees cooled off, and to-day many hives can be bought for first cost of material—bees, honey, wax or whatsoever they might chance to contain, all thrown in for good measure. Last spring I bought out a small apiary of 75 colonies for $2.00 per colony, when the same apiary was set up at a cost of $2.50 for the new, empty hive.

Last season the bee-keepers of this county organized an association, but failed to effect much as to business. Our local merchants threw a wet blanket over the thing, and thought that it had ceased to exist.

The spring of 1890 opened very favorable to the bee-keepers, so the call for the bee-keepers brought out a large attendance, resulting in an incorporation with five directors, who, as a prime movement, "fired out" the old coal-oil package, and with the firing out, a few went off at a tangent, still adhering to the flavor of "coal-oil in theirs."

Now for our export: Our honey-association met, and we were stalled over the situation. We counted up, and we found three cars of honey on hand, and extractors all running. Our inspector found that he had a delicate job to grade the honey. Just look around and see where your hat is, and how far it is to the door, before you tell the lady of the house that she does'nt make good butter; and it is about the same when you condemn the flavor of honey—sometimes!

But we get back to business: The Maricopa Bee-Keepers' Association has one car of No. 1 honey in new packages, and expects to ship to Chicago in a few days. This honey is mostly contributed near Phœnix. Tempe has two cars of honey mostly in old coal-oil packages, which will go to Chicago soon. All told, up to date, of this season's crop, about 6 carloads of honey have been produced in this valley. Our merchants had gotten prices pretty well demoralized, but our corporation has set the price of No. 1 honey at 5 cents per pound, and the value of the package added.

We have had a sample of our alfalfa honey passed on by Mr. A. I. Root, of Medina, O., and is pronounced equal to the best of clover honey of the East—so it is no very hard matter to get at the value of our honey in the Eastern markets.

Since writing the above, I can add that the Maricopa Bee-Keepers' Association starts a car to Chicago on July 22. The honey is sold at 7 cents per pound. Another car will go soon.

Tempe, Ariz,, July 19, 1890.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec, Ionia, Mich.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Bees did Moderately Well.

Bees have done moderately well here this season. Although it is very dry now, we had an abundance of moisture in the forepart of the season, and as *we* have the best soil on earth for withstanding drouth, as well as excessive wet weather, we do not have to report failure, neither for honey nor other crops; at the same time, seasonable showers would be of vast benefit to us now. Clover having never gained any extensive foothold here, we do not get much clover honey, but as it does well when sown, we have great hopes for it in the future. Our honey is from buck-brush, basswood, buckwheat and golden-rod, principally. I am stocking up with Carniolans this season.
J. W. STEEL.
Moorehead, Iowa, Aug. 8, 1890.

Poor Season in Ontario, Canada.

It has been a poor honey season here, but I am in a poor location for bees, being one mile from town, and there are many bee-men all around me, and in town, until the locality is overstocked. I had my 4 colonies on the summer stands packed with hard-wood shavings, and they came out strong in the spring. I took off 200 pounds of honey, and had 5 colonies, all in good condition. One man out in the country has taken 3,000 pounds off already, and is ready to extract again, from 40 colonies, spring count. How is that for Ontario, this poor season?

I have transplanted a lot of catnip, and it is doing well. I believe that it is a good honey-plant. I have watched the bees closely, but I never saw them work on golden-rod. I like the form of the "Honey-Almanac," and think that it is just the thing to create a big demand for honey.
J. P. LOCKWOOD.
Owen Sound, Ont., Aug. 12, 1890.

But Little Basswood Honey.

The honey crop is very poor in this locality; clover and basswood yielded but little. Honey-bees are now working on buckwheat and autumn flowers, which may produce enough honey for winter stores.
C. J. DONALDSON.
Lapeer, Mich., Aug. 11, 1890.

Honey Crop Almost a Failure.

The early drouth in June (it still continues) cut off the clover crop with almost everything else, so that there is no surplus, nor even enough to keep the young swarms. All colonies have run down so weak that if we have a fall harvest, we will have no bees to gather it. The prospect is bad for winter.
P. P. COLLIER.
Rush Hill, Mo., Aug. 11, 1890.

More Favorable Prospects.

Bees are doing very little in Western Connecticut this season, though the outlook in the spring was quite encouraging. The white clover was extra in quantity, but the wet weather and cold nights kept the bees back so much that I had to feed them to keep them alive; but now they are strong, and things look favorable for some honey this fall, but none from white clover worth speaking of. From 22 colonies I have 3 swarms. Honey must be higher in price this fall than usual.
H. H. KNAPP.
Danbury, Conn., Aug. 11, 1890.

Bees in Poor Condition.

I wish I could write something more encouraging from this corner of Missouri, but the fact of the matter is, that we can only report no swarms, no honey, and bees starving out the last of July. We had a cold, dry spring, and terribly hot and dry summer. We have had some good rains lately, and the bees are doing better now, but we cannot hope for much fall honey, as the bees are not in a condition to gather it, even if the flow should come.
L. G. PURVIS.
Forest City, Mo., Aug. 11, 1890.

My Experience with Bees.

Last spring I bought one colony of bees in a box-hive, which I transferred into a Chautauqua hive on June 18, while at that date they were on the verge of starvation. After transferring they commenced work rapidly, and now I have taken 75 pounds of honey from them; while my other colonies, which have swarmed once and twice, have averaged only about 40 pounds. So I have concluded to keep my bees from swarming, and buy increase, especially black bees. The AMERICAN BEE JOURNAL is found in the homes of a great many bee-keepers here, and is praised very highly by all who read it.
H. C. FARNUM.
Aristotle, N. Y., Aug. 8, 1890.

Bee-Keeping in Connecticut.

I see no reports from bee-keepers in this State ; I think that the reason is, they have nothing favorable to report I do not think that bees ever went through the winter with so little loss—the weather was so mild, that they flew a great deal. The consequence was, they consumed all their stores, and, on May 1, they were in a starving condition, and there was so much cold and stormy weather that they scarcely held their own, up to June 20. I lost one colony by starvation. The consequence is, there is very little increase. I had only 10 swarms from 42 colonies—about one-half of what I had from 17 colonies last year. Many of the bee-keepers in this vicinity, that had from 5 to 10 colonies, had no swarms.

There has been plenty of white clover, but the bees did not seem to gather much honey. They have been idle, staying on the outside of the hives, and had the appearance of swarming, for more than a month. They are not on the outside as much now. I do not know whether they have gone to work or not. I prevailed on my neighbors, by furnishing the seed, to sow seven or eight acres of buckwheat. I suppose that the bees have just commenced work on it. Perhaps with the buckwheat blossoms and fall flowers, they may obtain a sufficient supply for the coming winter.

R. B. Wheaton.

Middlebury, Conn., Aug. 12, 1890.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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The Apiculturist.............	1 75....	1 65
Bee-Keepers' Advance	1 50....	1 40
Canadian Bee Journal.......	2 00 ...	1 80
The 7 above-named papers	5 25....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25.. .	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
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Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
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Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
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History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75

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◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

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HONEY AND BEESWAX MARKET.

CHICAGO, Aug. 16.—Comb honey is held very firmly this week, and the prices for white in pound sections range from 14@15c, and some fancy at 16c, but the bulk of the sales are at 15c. Demand is quite good, and more could be sold than is coming. Extracted, 6@8c; there are free offerings of California at 6@7c. R. A. BURNETT, 161 S. Water St.

NEW YORK, Aug. 11.—We quote Southern extracted at 65@70c per gallon; orange blossom, 7@7½c per pound; California, 6@7c. No new comb arrived as yet. Beeswax, dull at 27c, and a further decline is expected.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Aug. 9.—The receipts of comb and extracted honey are very light; demand for comb is good at 14@15c for white 1-lbs.; dark 1-lbs., 12@13c. Very little demand for extracted yet. Beeswax, 22@25c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Aug. 9.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 14@15c; 2-lbs., 12½@13c; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, August 6.—Demand is good for the new crop, and receipts are very light. White 1-lbs., 15c.; 2-lbs., 13@14c. Dark 1-lbs. 12@13c.: 2-lbs., 12c. Extracted, white, 7c.: dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6½c. Beeswax, 28@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, Aug. 12.—Very little new comb honey in the market, and it is selling at 14@15c. Extracted, 7@8c. Beeswax, 26@27c.

M. H. HUNT, Bell Branch, Mich.

DENVER, Aug. 7.—Old honey all gone. New crop is arriving freely. Prospect good for a fall crop. We quote: 1-lbs., 14@16c. Extracted, 6@8c. Beeswax, 20@25c.

J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Aug. 15.—New honey is coming in and we are selling at 18c. Extracted, 7@8c. Beeswax, 30c. for fancy yellow.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, Aug. 12.—Good demand for comb and extracted honey. Arrivals are insufficient for the demand. We quote best white comb at 14@16c. Extracted at 5@8c. Beeswax is in fair demand at 24@26c on arrival for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

◆

Globe Bee-Veils.—Here are two letters received—from two of our correspondents, and are about like scores of others, showing how the Globe Veils suit those who have them. Not one objection has ever yet been received:

Send me two more Globe Bee-Veils for my neighbors. I like mine very much.—J. B. Dunlap, Rochester, Ind., July 17, 1890.

The two Globe Bee-Veils came by return mail. Thanks for promptness. I find them just as neat and clean as new (the soiling is so slight). They are indeed *sure* protection against bee-stings, mosquitoes, etc.—John Hager, Jr., Arabi, La., July 16, 1890.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Convention Notices.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The Cortland Union Bee-Keepers' Association, will hold their Annual Basket Picnic at the Floral Trout Park, in Cortland, N. Y., Tuesday' Aug. 19, 1890. Essays will be in order. All come.
M. H. FAIRBANKS, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send them.

Advertisements.

PEYCKE BROS. & CO.,

Commission Merchants

JOBBERS OF HONEY,

OMAHA, NEBRASKA.

Our **Honey** Market is one of the best in the U. S. We make liberal advances on consignments. Should be pleased to open correspondence. Satisfactory References furnished.
34A1t PEYCKE BROS. & CO.

Mention the American Bee Journal.

NOW FULLY TESTED A SUCCESS!

The New Dibbern Bee-Escape.

THE NEW BEE-ESCAPE has now been fully tested, and recently greatly improved. I now offer them for sale, by mail, 35c. for sample, or $3.00 per dozen. Complete Boards, 60c. or $5.00 per dozen by express.

33A2t **C. H. DIBBERN, Milan, Ills.**

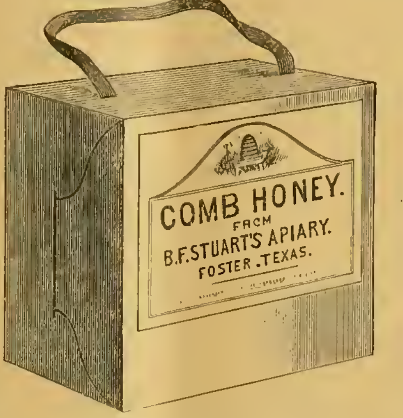
Mention the American Bee Journal.

Folding Paste-Board Box

FOR COMB HONEY.

IT HOLDS A SECTION of Comb Honey, preserving it from dust and dirt in a Store, and the "red-tape" handle makes it convenient for the purchaser to carry it home.

The label shown on the Box, is our "No. 5 Gummed Label," but any of the Gummed Labels can be put on them, by the honey-producer.


COMB HONEY.
FROM
B.F.STUART'S APIARY.
FOSTER .TEXAS.

We can furnish these Folding Boxes for one-pound Sections, 4¼x4¼, for **$1.00** per 100, or **$8.50** per 1,000, by express. The name and address of the honey-producer will be printed on 1,000 or less, for **75** cents extra.

A Job Lot of Folding Boxes, which will hold Sections 5x5 inches or less, will be sold at **only 80 cents per 100.** ORDER EARLY to get these, as the supply is limited.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Mention the American Bee Journal.

Choicest Italian QUEENS!

Purely BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf

Mention the American Bee Journal.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Eighth ∻ Edition ∻ Just ∻ Published

New and Revised Edition

—OF—

BEES AND HONEY,

OR THE

Management of the Apiary

FOR PLEASURE AND PROFIT

—BY—

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

LIBERAL DISCOUNT to dealers, by the dozen or hundred.

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246 East Madison Street, - CHICAGO, ILL.

☞ This new edition of our BEES AND HONEY will be given as a Premium for only **three new subscribers,** with $3.00; or clubbed with this JOURNAL for $1.75.

BEES AND HONEY

The Dovetailed **Strongest, Best and Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1 25 ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

FOR TRUE-BLOOD CARNIOLANS

SEE our Advertisement in July 5th Number of this Paper—page 462.

J. B. MASON & SONS,
31Atf MECHANIC FALLS, ME.

Mention the American Bee Journal.

Prices Reduced.

SELECT TESTED QUEENS, $1.25. Warranted Queens, 75 cents—6 for $4.00. Make Money Orders payable at Nicholasville, Ky.
14Etf J. T. WILSON, Little Hickman, Ky.

American Carniolans. From two finest Home-Bred Colonies—only one swarmed this season. Very gentle, good honey-gatherers. Dry weather disposed of drones near me. Select Untested Queens, $1.00. Safe arrival guaranteed.
32A4t E. F. QUIGLEY, Unionville, Mo.

Mention the American Bee Journal.

Ah, There! One Untested Italian Queen, 75c., 3 for $2.00; Tested, $1.50. One Untested Carniolan Queen, $1.00, 3 for $2.50; Tested, $2.00. Bees by the pound and Nucleus. Send for Price-List. Reference—First National Bank. H. G. FRAME, North Manchester, Ind.
22Etf

Mention the American Bee Journal.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,

34Atf **J. A. KING, Mankato, Minn.**

Mention the American Bee Journal.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

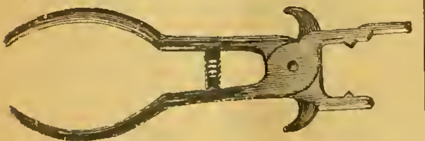
For Shippers and Retailers.

All boxes printed with your Business Card on front if desired.

Samples and Prices on application.

MUNSON & CO.,
30A13t New Haven, Conn.
Mention the American Bee Journal.

Jones' Frame Pliers.



FOR taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, **40** cents., by mail. By express, 30 cents.

THOS. G. NEWMAN & SON,
246 East Madison St., CHICAGO, ILL.

CANADIAN QUEENS!

GIVE THEM A TRIAL.

	Each.	Per Three.	Per ½ Doz.
Italians, Virgin	$ .40	$1.00	$ 1.75
" Untested	1.00	2.75	5.00
" Tested	1.50	3.75	7.00
" Select Tested,	2.00	6.00	10.00

Address, **R. F. HOLTERMANN,**
27A8t ROMNEY, Kent Co., ONT.
Mention the American Bee Journal.

HONEY

WE are now ready to receive shipments of **HONEY,** and would be pleased to open correspondence. Liberal advances made on consignments. Prompt returns. Quick shipments of **Comb and Extracted** will meet an active market. Reference on file with the American Bee Journal.

S. T. FISH & CO., 189 So. Water St.,
33A20t CHICAGO, ILLS.
Mention the American Bee Journal.

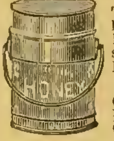
The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight: 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.
Mention the American Bee Journal.

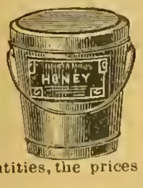
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs.	$1.80	$12.00
½-Gallon, holds 5 lbs.	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook, Montgomery Co., N. Y.
1Atf
Mention the American Bee Journal.

Italian Queens by Return Mail

Tested, $1.00 each.
Untested, 60 cts. each, or four for $2.00.

34Atf **GOOD BROS.,** NAPPANEE, IND.
Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 **cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

HOME EMPLOYMENT. AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper. *Big Cash Premiums.* Sample FREE.
THOS. G. NEWMAN & SON,
923 & 925 West Madison-Street, - CHICAGO, ILLS.

QUEENS! QUEENS! QUEENS!

By Return Mail.

A**S FINE A LOT** as was ever reared, at the following low rates—purity and safe arrival guaranteed:

Tested, each	$1.50
Warranted, each	1.00
" per dozen	9.00
Untested, each	.75
" per dozen	8.00

Will state that these Queens are all reared from our best honey-gathering strains, in full colonies. We are one of the oldest and largest breeders in America. Give us a trial order.

Address,

W. W. CARY, - COLERAINE, MASS.

Please Mention the American Bee Journal.
31Atf

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Att—4Mtf
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Leipziger Bienen-Zeitung.

Organ für alle Imker deutſcher Zunge.

Billigſte und reichhaltigſt
illuſtrierte bienenwirtſchaftlich
Monatsſchrift. Mitarbeiter
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Imker. Beliebteſte und ver
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Preis pro Jahr nur ½ Dolla
Beſtellungen ſind an unſere
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diger **Stephen Roese** in Maiden Roc
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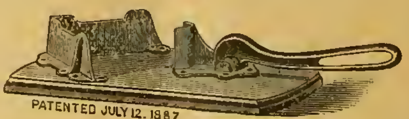

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Voice of Masonry and Family Magazine.

Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine **Portraits** and **Illustrations,** and a great variety of articles, stories and poems for Freemasons and their families; also **Eastern Star, Masonic Gleanings** and **Editorial Departments.** Price per year, $3.00.

JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Aug. 30, 1890. No. 35.

EDITORIAL BUZZINGS.

Right is right—ever will be,
And right the day must win ;
To doubt would be disloyalty,
To falter would be sin.

☞ The Baltimore *Farmer* reviews our book—"Bees and Honey"—and gives it a very favorable notice. Thanks.

☞ Ammonia, as a bee-sting remedy, is one of the best—that alkali naturally tends to neutralize the acid of the poison.

☞ The "Nebraska Bee-Keeper" is the name of a new bee-paper just started by L. D. Stilson & Sons, and edited by the father. It contains 16 pages, and the second number is on our desk. It is to be published monthly, and as there is no price stated, we presume it is for free distribution among the members of the Nebraska Association. It makes a creditable appearance, and we wish it success.

☞ Bees may be trespassers as well as our domestic animals. In a pending case the Court of Appeals has been reached ; all Courts below pronouncing in favor of the plaintiff who sued for damages because the bees invaded the flower-bed in his yard, and stung members of the family.—So says the *Western Rural.*

We may have been asleep—but we think not ! Will the *Rural* kindly give us the "particulars" of this very interesting case. As Manager of the National Bee-Keepers' Union, we have had full charge of all law-suits of this character, but of the one mentioned, we have no knowledge. It is evidently another hoax !

Honey Statistics.—On July 18, 1890, Mr. A. I. Root, editor of *Gleanings in Bee-Culture*, sent out a list of questions to special reporters all over the United States, thereby endeavoring to ascertain the extent of the crop of white honey secured this year. In summarizing the various replies to the queries propounded, Mr. Root comments as follows :

> With very few exceptions, as we stated in our last issue, the prospects are poor, and the average yield per colony is exceedingly moderate. But as the reports were sent out a little early, it is not impossible that things will brighten up a little, even yet. In fact, white clover seems to be hanging on in some localities, where it was expected that the yield from that source had entirely ceased.
>
> California looms up with a large crop of honey, and that means a good deal, for this State produces not a small percentage of all the honey produced in the United States. Colorado has one reporter, and he says, "Fair to good." Arizona, the State where alfafa is produced, reports about 90 pounds per colony. Minnesota does not seem to be uniform. In east-central and eastern part of the State there is but very little honey ; but in the central and west-central parts, the yield seems to have been good. Wisconsin, another usually good State, has also no honey of any account. Indiana, California, Arizona, Virginia, West Virginia, and Washington, report the prospects good. Almost all the rest of the States are reported poor.
>
> Fruits will be rather scarce, and the bee-keeper has not fared any worse than many of those engaged in kindred industries.

On July 28, 1890, the *Canadian Bee Journal* also sent out requests for reports regarding the honey crop "covering the entire Dominion, from Winnipeg to Nova Scotia and New Brunswick." The editor then recapitulates the answers as follows :

> The reports may be summarized in brief, to say that all taken together the crop throughout the country is small, perhaps even below last year. New Brunswick and Nova Scotia have done but very little either in increase or honey crop. Quebec is the same, only more so. Ontario reports would indicate that, on the whole, swarming has been good, while the crop of honey is below the usual average. In some sections the yield has been excellent, notably York county, with Peel and Wellington not far behind. Simcoe is behind in the race, neither clover nor basswood having done anything much. The trouble with a great many colonies, was that the bees were too weak to gather what did come. Oxford county is medium. The writer was through a portion of that county last week, and visited one or two apiaries.
>
> There is no question as to the scarcity of peaches, plums, pears, etc., and with this fact in view, honey-producers should be firm in their prices. The remarks of one or two of our correspondents in this direction should be heeded. We should advise that no honey be sold at wholesale at less than 10 cents per pound.

The Honey in France is very thin and watery. They have had too much rain, while, in America, we have been scorched by the burning rays of the sun. Had the moisture been more evenly distributed, it would have been far better.

Bees as Ventilators.—The St. James *Gazette*, of London, England, is responsible for this item of foreign news :

> I do not know whether it is generally known that in India, and I believe in other tropical countries, there are in every hive what one can only describe as "ventilating bees." I mean that during the hot season two or three bees post themselves, on their heads, at the entrance of the hive and fan the interior with the incessant motion of their wings. They are relieved at intervals by fresh bees, who carry on the process. They are kept to their duty by a sort of patrol of bees to insure their incessant activity. This is a well authenticated and known fact.

It is certainly "generally known" in America that bees fan with their wings for purposes of ventilation, whether it is known by the *Gazette* or not. The bees practice the fanning process here as well as in India.

Spiders in the Apiary.—Mrs. L. Harrison remarks as follows in the *Prairie Farmer* about her treatment of spiders in the apiary :

> I used to make war on them. Sorry to own it, but I formerly killed every one that I could. Ugh ! the great ugly things ! How horrid ! They might bite me. But I have repented in sackcloth and ashes. We have kissed and made up, and now we are the best of friends. I catch every one I can and carry it to a hive containing unoccupied combs and put it in. You see our good friend Father Langstroth ("may his shadow ne'er grow less") called our attention to the fact that the spiders keep all the moth-worms from combs. Where the mother spider has her home, the moths cannot flourish. I sometimes take their eggs encased in a downy web, and place them into a hive of unoccupied comb, to live and flourish.

☞ We appreciate the following from the *American Apiculturist* for July, written by Mr. M. A. Kelley :

> The AMERICAN BEE JOURNAL is certainly the "wheel-horse" of bee-journalism.
>
> The fraternity of bee-keepers surely have great reason to be proud of the noble band of men that have editorial control of our different bee-periodicals.

As one of that "noble army of martyrs," we make our politest bow.

What Next?—F. E. Merriman, of Massachusetts, has patented a "bridge" to enable bees to pass through the chaff or packing of a double storied hive—two strips nailed to cleats allowing space for a bee to pass constitutes this "bridge," which, like many another device, has been used by apiarists, in some form, of necessity for years.

Many Persons are naturally unfit for the bee-business, from carelessness and inaccuracy about their work. I know of no out-door pursuit where so much depends on the right thing being done at the right time, and in the right way. A willingness to work hard, and a determination to succeed, are characteristics of the prosperous bee-keeper.—G. M. DOOLITTLE.

Humbugs and Falsehoods, especially as relating to bee-keeping, are ever relentlessly pursued by the AMERICAN BEE JOURNAL. What the *Christian Woman* (a splendid periodical published in Philadelphia, Pa.) thinks of our efforts in the direction of hunting down lies about our pursuit, is told in the following graphic language :

> The AMERICAN BEE JOURNAL is sharp, and swift in pursuit of humbug and falsehood. The newspaper sensational articles on manufactured honey, on glucose, and paraffine comb are proved to be purely imaginary ; or evidences of reporters being hoaxed ; but no matter, such reading makes people stare and wonder, and sells the newspapers. The average reader loves to be stunned by finding mare's-nests and mule's-colts. Print the most astounding statements about things, and particularly about prominent public personages, and specially particular about ministers, and discriminately severe upon Protestant clergymen, and never contradict them where proved to be falsehoods, and you have the popular and great daily !
>
> Following the daily, the weekly paper culls the lies and the sensations, selecting the worst and most interesting slanders, and then the staid and permanent Encyclopedia embalms the corpse, and future essayists cite the statements as standard truths. But one thing is certain, that all who read the AMERICAN BEE JOURNAL will have their minds settled in regard to the "glucose and paraffine comb" story.
>
> "If, therefore," says the JOURNAL, "you are extracting, beware of extracting too closely." The practice is bad in regard to honey, and worse respecting the papers.

* * *

Orange-Blossom Honey. — Many of the vile compounds found on grocers' shelves are labeled "Orange-Blossom Honey." This cognomen was invented to deceive. There is no such thing as pure orange-blossom honey—it is always mixed with something else. The *Rural Californian*, which can always be relied upon for true statements about honey, says :

> At the time the orange trees are in bloom there is also a great variety of other tropical plants in blossom, and the bees gather from all these, not working exclusively on the honey. Honey stored at this season of the year is of very rich quality, and commands a high price. When quoted at low rates, it is *prima facie* evidence that it is not the genuine article.

* * *

At the Paris Exposition, English and American bee-keepers were far in advance of their German associates in the business ; and America was far in advance of England—especially in the matter of apiarian literature. There were twenty American apiarists represented. —*Exchange.*

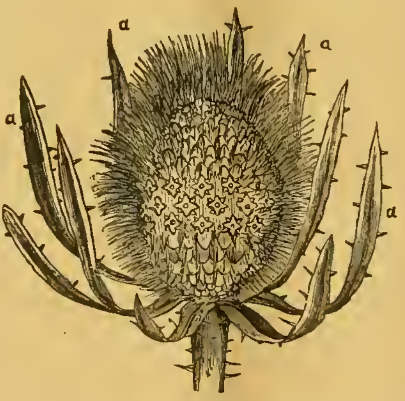
* * *

Honey Fruit-Cake.—One pint of honey, one pound of butter, 10 eggs, one tea-cup of sour-milk, one tea-spoonful of soda, 5 pounds of currants, 5 pounds of raisins, 3 pounds of citron, one table-spoonful of cinnamon, allspice and nutmeg, and 1½ pounds of flour.

Teasel Honey.—In New York this honey has a wonderful reputation. Bees usually gather a bountiful harvest from the teasels, and the honey is very light in color, and pleasant to the taste.

A correspondent asks for a description of the teasels, and how they are cultivated. This will be answered most fully by the following from an exchange :

> The accompanying engraving fairly represents in shape and size the merchantable portion of the plant known as Fuller's teasel (*Dipsacus Fullonum*). It is used in woolen factories to raise a nap on cloth.
>
> It is extensively grown in some parts of Onondaga county, N. Y.; also in Oregon, and possibly a few in Massachusetts and Connecticut. But three-fourths of all that is used in the United States are grown in and immediately around Skaneateles, N.Y.
>
> The plant is biennial as a rule, but stunted plants sometimes survive five or more winters. The ground for their culture is prepared as early in the spring as possible ; seed is sown in drills about three feet apart and lightly covered. The seed germinates slow, and the plant is about like a young clover plant when it comes up.
>
> Careful hand hoeing and horse cultivating follows at sufficiently short intervals to keep all grass and weeds in subjection. Of late, some of the best growers have planted a very thin crop of corn in the rows, leaving the stalks to hold the snow in winter, as two or three degrees below zero is sufficiently cold to kill a teasel plant if in no way protected.



> The second year, during the month of May, they are cultivated, and soon after begin to throw up a centre stalk which grows very rapidly, reaching a height of four to six feet by July 15.
>
> About this time the "king" (or head of the centre stalk) begins to blossom. It is a burr in all respects like our engraving, only a little larger. There is a blossom for every hook ; they begin to open in the centre of the head first, blossoming toward the tip and base, ending at the base.
>
> On each side of the main stalk, laterals shoot out (from four to one dozen) each one bearing a burr or head at each extremity ; these are called mediums, on account of being less in size than the "kings," and larger than the buttons. "Buttons" are the smallest heads on the plant, and grow on side shoots from stalks bearing the mediums.
>
> As above stated, the "kings" blossom first and in bloom about one week, by this time the most forward of the mediums begin, and later the buttons ; in all, the plant is in bloom three to four weeks. The harvesting is begun when the blossoms have fallen entirely off of about one-third of all the burrs.
>
> The harvesters are supplied with gloves, small knife, and a large basket, into which to put the burrs as they are cut. As the blossoms fall, the field is gone over again, each time cutting all that are ready ; the entire harvest consuming about twenty consecutive days.
>
> They are carted from the field to barns and sheds, and spread on scaffolds to dry—no artificial heat is used. A free circulation of air is secured by opening the doors and windows.
>
> As soon as dried they are ready for the middle man who cuts off the long, coarse spikes at the base, cuts the stem to an even length (three inches) and sorts them, making ten or more sizes ; hand packs them in large cases, when they are ready to ship to the woolen manufacturer.
>
> They are sold by weight, ten pounds being called one thousand. An acre of land will produce from 100,000 to 250,000, according to the strength of soil and care in cultivation. The honey-bee, too, gathers a bountiful harvest of the very best honey.

* * *

Antidote for Ants.—I tried several methods to prevent ants molesting bees, and found the following far the most satisfactory, writes Prof. A. J. Cook to the New York *Tribune*. By the use of a crowbar make a hole in the middle of the ant-hill, down to the bottom, which is easily found by the more open or less compact earth. Then turn into this hole a gill of bisulphide of carbon, and fill and crowd down with earth. As the liquid is very volatile, and cannot pass out of the now compactly filled hole, it quickly evaporates and kills all the ants. If clay be near, always use this to crowd into the hole, as it is more impervious than is sand, though by firmly pressing with the foot the sand can be made to hold the liquid. Kerosene may be used instead of the carbon, but it is far less effective. So, too, of carbolic acid. By means of syrup, so covered by gauze that bees are excluded, the ants can be trapped in great numbers and destroyed. I have often done this, and by adding Paris green have poisoned the ants.

* * *

Killing Bees for their honey, or "brimstoning" them as it is now called, was unknown in the days of Aristotle, Varro, Columella and Pliny, and must have originated in the dark ages, when the human family had lost in apiarian pursuits, as well as other things, the skill of former ages. We are told that the old cultivators took only what their bees could spare, killing no colonies, except such as were diseased, or from any cause must die anyway.—*Exchange.*

* * *

The Citizen Soldier has the place of honor in "Frank Leslie's Popular Monthly" for September, the frontispiece of which is a fine equestrian portrait of Col. Appleton, Seventh Regiment, N. G. S. N. Y. There are, as usual, short stories, poems, literary and descriptive essays in abundance.

Nature in August.

Now Nature sits with folded hands,
As resting from the busy year,
While o'er the wide and teeming lands
She contemplates the goodly cheer
She gives ; all energizing powers
Lie mute and still, and drowsy hours
Move noiselessly, their jocund moods
And songs foregoing ; in deep woods
And fields a slumb'rous silence broods
Unbroken, save by beetle's drone
And o'erfed *bees'* dull monotone.

Or leaves' low rustle as they make
A pathway for the gliding snake.
The patient cows seek shadows cool,
That stretch themselves like giants prone
Along the edges of the pool—
And midst the waters stand knee-deep,
In dreamy, semi-conscious sleep.

Birds sing no more, but on the hill
The tender plaint of whip-poor will,
Who, telling oft her woful tale,
Lingers full late after her time,
While at slow intervals the chime
Of sheep-bells in the distant vale
Falls on the ear like tuneful rhyme,
Lulling the senses, till in idle dreams,
We half forget the real in the thought of
that which seems.

—*American Magazine.*

QUERIES AND REPLIES.

Does the Golden-Rod Yield any Honey ?

Written for the American Bee Journal

QUERY 726.—To what extent, if any, does the golden-rod yield honey in your bee-range ?—Miltona.

None here (Illinois).—DADANT & SON.

Very little, if any (Iowa).—J. M. SHUCK.

It is very limited (Illinois).—MRS. L. HARRISON.

None, that I know of (Illinois).—J. M. HAMBAUGH.

Often very bountifully. It did last year. (Michigan).—A. J. COOK.

It yields a very little some years (Michigan).—R. L. TAYLOR.

It yields considerable very fine honey (Illinois).—C. H. DIBBERN.

It does the best it knows how, and that is nothing to "brag about," usually (Ohio).—A. B. MASON.

I do not count much on it, but I do not know positively (Illinois).—C. C. MILLER.

Not any that I have been able to discover. There is but little golden-rod here (New York).—G. M. DOOLITTLE.

One season, a few years ago, it yielded largely. Usually it yields not at all (Indiana).—M. MAHIN.

We have acres of it in bloom in early September, but I have never found it to yield much honey (Georgia).—J. P. H. BROWN.

Very largely. In fact, it is depended upon for fall and winter stores (Massachusetts).—J. E. POND.

What is known as golden-rod does not yield honey in this locality (Ohio), as I have never seen a bee working upon it yet. There is a variety of the *Solidago*, however, that does yield honey quite freely here the latter part of August. I think that it is the *S. Scrotina. Solidago Odora* is the name of the plant generally known as golden-rod. There are 48 varieties of the *Solidago* in this country, and it is probable that many of them yield honey.—G. L. TINKER.

About one year in three, golden-rod gives us quite a little surplus honey during the latter part of August (Michigan).—JAMES HEDDON.

I cannot say with any certainty. I have seen bees at work on it some seasons, and in others the bees left it entirely alone (Michigan).—H. D. CUTTING.

Golden-rod is "no good" in my locality (Kentucky). Pardon me when I say that I believe it is the poorest honey-plant in the world, when speaking in view of its reputation. Tradition sticks wonderfully tight to bee-culture, and golden-rod has a traditional fame, but no honey.—G. W. DEMAREE.

I consider the true golden-rod of no value in this locality (Iowa). After much inquiry and observation, I am forced to the conclusion that a good many men do not know golden-rod. Not a week ago I was talking with a bee-keeper who has 50 or more colonies ; he said that golden-rod was a splendid honey-plant. Upon inquiry, I found he called the yellow-ray flowers, golden-rod.—EUGENE SECOR.

It should be remembered that there are many different varieties of golden-rod. These vary greatly as to their value for honey. These also vary in different seasons, and on different soils, so that a direct answer is impossible to the question propounded.—THE EDITOR.

CORRESPONDENCE.

HIVES.

Not all in the Kind of Hive—Improving Bees.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

Many seem to think that large yields of honey are owing pretty much to the hive used, or at least seem to convey that idea, but this is not so. Hives have something to do with the yield of honey, of course, but nothing as compared with a thorough knowledge of the location we are in, and an understanding how to apply that knowledge so as to get the bees at the right time to secure the yield of honey when it comes.

Again, the manipulation of hives has more to do with our surplus crop than the hives themselves, for no matter how good the hive is, if the combs are never touched, or the surplus room put on in the right time, all *may* count for naught to the would-be bee-keeper, and the flowers will bloom in vain, as far as very much profit is concerned.

In order that none might have a mistaken idea in this matter, I have said in concluding several of my articles, that if any one could not spend the time on bees that is required, he had better keep out of the business. I know of no hive with which a man can secure large results by simply folding his hands and letting the bees work. Such is not the economy of Nature, and in order to succeed in any calling in life, we must put energy, industry and perseverance into our work, if we would reap a harvest worth the gathering.

To work hard from 12 to 16 hours each day, at mere physical labor, is not all that is required, either, as many assert by their actions, if not by words; but there must be an energy and push, mentally, sufficient to grapple with all of the unsolved problems which are in the way of our success. If these are all combined, there is no reason why bee-keeping will not give as good results for what is expended upon it, as any other calling in life, even though it is not so supposed by the majority of the world.

I wish it understood that large yields of honey can only be secured where there are large numbers of bees in the hive at the right time, and securing such bees in time for the honey harvest is the great secret of success. That more bees can be obtained at the right time by the use of the Gallup frame, together with a proper manipulation of the same, is my belief, and is the only reason that I adopted that style of hive, for other hives give many good points not obtained in the Gallup, but none of which are really great enough, in my opinion, to make good their loss on this one point of preference that this hive gives.

However, I have done nearly as well with the Langstroth hive and frame, and did I have 40 or more colonies, on that style of frame, or in any of the many good hives of the present day, I should hesitate some time before I made a change, trying first to see if a thorough knowledge regarding their manipulation, and adapting this to my field, would not give success. If it should prove that the hive was not at all adapted to my locality, then, of course, I would make a change ; but to change hives every time something new comes along, with the thought "that with this hive I shall succeed," is not the proper thing to do. "Prove all things, and hold fast to that which is good," is as trite a saying to-day as it ever was.

IMPROVING THE RACE OF BEES.

There probably is not an apiary in the United States containing 20 colonies, but what the owner thereof is compelled to acknowledge that certain colonies do better than others nearly every year in producing honey, as we often hear it remarked, "If the whole apiary could have done as well as such a colony, I should have had a big yield."

Some contend that various things have *all* to do with it, but I am inclined to think that the race of bees has the greater influence over these things, and that certain traits of character exist in certain colonies to a greater extent than in others, making them more susceptible to our manipulation, etc., that brings about the different results. If this is true, there is a chance for improvement in our bees, and I am inclined to think that it will be more to our credit in the future to strive to improve on the bees which we have, rather than to continue importing stock.

But how can we accomplish this improvement? I know of but one way at present for the majority of us to accomplish this, and that is through the queen. Could we bring the drones into subjection, we might do better or get along faster, but as all efforts at controlling these have proven failures, we have only the queen to aid us as a certainty. Well, such being the case, how shall we proceed? I do not know that I can give my views better than to say that some years ago I adopted the following plan:

At the close of each honey season I struck an average of the number of pounds of surplus honey produced by the whole apiary, and then all colonies which did not come up to the average were marked. These colonies were united either in the fall or spring with others, which had produced an average amount, or above, if such uniting was deemed advisable, through colonies light in bees or scarcity of honey.

Of course I always destroyed the poorest queen and retained the other. If all were not disposed of in this way, I superseded the inferior queens by those reared from colonies known to have produced the very largest amount.

The above requires the keeping of a record of each and all colonies in the apiary, which is of benefit in several ways, beside the one here spoken of. Mr. Newman's "Apiary Register" is a nice thing for this purpose, and no apiary should be without one of these "Registers." All queens at all times are reared as far as possible from those producing the largest yields of honey, and in this way the apiary can be steadily improving as regards the honey-gathering qualities of the bees, instead of retrograding.

Borodino, N. Y.

Are you Going to the Fair? If so, will you kindly send to this office and get a few samples of the BEE JOURNAL, and give them out to your friends there, and get up a club? We will send them to you with pleasure.

DROUTH.

The Plants which are Less Affected by It.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

Day after day the thermometer has been playing around one hundred in the shade, and one day it was one hundred and ten, accompanied by hot wind. I can now sympathize with Kansas. These hot winds bear away the last drop of life in leaf and twig. A large green ash growing near the honey-house, has shed almost all its leaves, drying green upon the tree, and then falling. Elms and lindens, my especial pets, have suffered severely, and part of them are now dead. If horticulturists could give hints how to preserve trees during such trying ordeals, it might do a world of good.

Judging from my own observations, I think that keeping the soil mellow around the trees during drouths of long continuance, is better than pouring water upon the hard soil under them, which only serves to bake it down harder.

In order to preserve the lives of two cherry trees, whose leaves were turning yellow, I mellowed the soil and then covered it with about a foot of leaves, which I keep in place by piling on brush, so that the wind or chickens may not remove them. I then gave them a liberal watering. If I had one pail of water to give to a tree every night for two weeks, I would prefer to to give fourteen pailfuls at once, and should expect then that it might do good. One pailful at a time does more harm than good, if the soil is dry and hard. After a light shower is a good time to give a liberal watering.

Sunflowers, helianths, like the eagle with its eye on the sun, can face it all day without blushing, laugh at the heat, and like the old darkey, "think him mighty pleasant weather." I have been watching the sunflowers for years, in hopes to prove that it would do to tie to as a great honey-plant during dry weather, but have not been able, so far, to make it "pan out." Bees gather honey and pollen from it, but it yields sparingly.

One morning I was highly elated by seeing so many bees with tremendous loads of pollen on the face of a big Russian, but on taking a nearer view I found that they were not Italians, but some species of wild bees from the woods.

Cleome-integrifolia stands dry weather well, and has been blooming during the very hot weather; but bees work upon it only in early morning. It does not appear to yield as much honey in this locality as its near relation, Cleome-Pungens, otherwise known as spider-plant. Prof. Cook, of Michigan Agricultural College, last year, grew Rocky Mountain bee-plant on a large scale, in order to find whether it would pay to raise it for honey alone, and it failed to fill the bill—the climate could not be furnished along with the seed.

Peoria, Ills.

BEE-DISEASE.

Salt is the Antidote for the "Nameless Bee-Disease."

Written for the American Bee Journal

BY JOSHUA BULL.

It appears, from what we read in the bee-papers from time to time, that the "nameless bee-disease" continues to be troublesome in various places, and that information is wanted concerning a remedy. Perhaps it may not be amiss for me to report my little experience with this strange disease; although not very extensive, yet the little experience which I have had therewith has been of such a nature that it has been very conclusive and convincing to me, at least, in the following points:

First, that the disease originates with the queen; second, that it is not contagious; and third, that common salt properly administered will effect a permanent cure.

In support of the foregoing conclusions, I offer the following facts:

In the summer of 1888 I obtained two queens from parties living several hundred miles distant, and I introduced those queens into good, healthy colonies. Previous to this time I had never noticed any signs of the "nameless disease" among my bees, neither did it appear in these colonies during the remainder of that season; they wintered on the summer stands, built up very strong in numbers in the early spring of 1889, but about the time of fruit-bloom they were both attacked with this disease, and began to dwindle very rapidly.

When their numbers were reduced about one-half, I commenced experimenting with one colony by sprinkling them with salt-water, which did not seem to do any good. I also dissolved about a table-spoonful of salt in a little water, and mixed it into one gallon of honey, and fed it to them as fast as they would take it; this seemed to arrest the progress of the disease somewhat, and when the brood began to hatch, which had been nursed with this salted honey, they began to recruit, and increase in numbers again.

The old diseased bees continued to die off until they were all gone, after which the colony became healthy, strong and vigorous, and have never shown any signs of disease since. The cure appears to have been complete and permanent.

The other diseased colony, which was not medicated with salt, all dwindled away and became extinct, queen and all.

Then, to demonstrate whether or not this disease is contagious, I put a healthy colony on the same combs in the same hive where the diseased colony had died, to see what the result would be; and they are to-day healthy and vigorous, and have never had any symptoms of disease, so far as I know, and the disease has not appeared in any other colony in my yard, except those two having the imported queens.

Without doubt it was the salt that effected the cure. The object in putting the salt into the honey, is in order to get the bees to feed it to the queen and the young larvæ.

If any one has bees affected with this disease, I hope that he will try feeding salt, and report the result in the AMERICAN BEE JOURNAL, for the benefit of the fraternity.

Seymour, Wis., Aug. 19, 1890.

INSTINCT—REASON.

Are Bees Guided by Instinct, or by Reason?

Written for the Australasian Bee Journal
BY T. J. MULVANY.

The question is frequently raised, when treating of the habits and actions of the inferior animals (more especially those of insects in general, and of bees in particular), whether those actions are guided by instinct only, or a certain degree of reasoning power; and the discussion is, as it appears to me, often carried on in a loose manner, and consequently ends without any satisfactory conclusion, owing to that prolific cause of irreconcilable difference of opinion—battling about words, the actual meaning of which we have not first taken some trouble to agree upon.

These remarks, which are commonplace enough, have been suggested at present by an article which appeared lately in a leading German newspaper (*Kolnische Zeitung*), which publishes occasionally essays of "Natural Science Gossip." The one to which I now refer is headed, "How do Bees and Insects of their Class Find their Way Home?" and as it may be of interest to the bee-keeping readers of this journal, I append a translation of that portion which refers more particularly to the honey-bee, only offering these few observations by way of preface:

About the meaning of the word "instinct," there is perhaps little room for misunderstanding; it is pretty generally accepted as it is defined in a good dictionary to be "a certain power or disposition of mind by which, independent of all instruction or experience, and without deliberation, animals are unerringly directed to do spontaneously whatever is necessary for the preservation of the individual or the continuation of the kind."

This applies not only to inferior animals, but also to man, who is clearly gifted with instincts quite apart from his higher intellectual faculties. It is instinct which causes the newly-born babe, as well as the young of any of the inferior mammalia, to turn to its mother's breast for its first nourishment, and it is instinct which sets in operation the complicated system of nerves and muscles essential to the performance of the ordinary functions of walking, eating, drinking, etc. It is sometimes termed "a blind instinct," which is an inappropriate expression, meant, no doubt, to convey only that it acts without foresight or premeditation on the part of the individual, but which is liable to the misconstruction that the results are likely to be clumsy or uncertain as compared with those attained by the exercise of reason. The very reverse of this is, however, in reality the case. As the definition above quoted proceeds to say, "Instinct differs from intellect by the unerring certainty of the means it employs, the uniformity of its results, and the perfection of its works prior to and independent of all instruction or experience."

The word "reason" on the other hand, is one open to more diversity of meaning. It is used in different senses by philosphers, as well as by ordinary people, some taking it as almost synonymous with intelligence or with understanding, while others draw five distinctions between these terms, and define reason to be "the highest faculty of the human mind, by which man is distinguished from brutes, and which enables him to contemplate things spiritual as well as material."

In this sense Locke says, "Reason is natural revelation whereby the Eternal Father of Light and Fountain of all Knowledge communicates to mankind that portion of truth which He has laid within the reach of their natural faculties." Now, taken in this high sense, it would, of course, be a misapplication of the word to say that the inferior animals exercise their reason under any circumstances; but as regards the act of reasoning, one of its admitted definitions is the power of "deducing inferences or conclusions from premises," and although no one will claim for the lower animals the exercise of his power in the way of abstract reasoning, there can be no doubt that they often do practically draw conclusions from facts presented to them by their senses, and act in what we may call a rational manner in accordance with those conclusions so as to enable them to effect some object which they have in view. It is surely unnecessary to specify instances.

Every lover of animals will know a variety of cases in which the dog, for instance, displays this power of observation, and of suiting his action to the exigencies of the case. We all know what a complete understanding can be established between him and his master; how he learns to comprehend, if not the actual words, at least the meaning of what is said to him; how he can, in fact, to use a common phrase, "Do everything but speak." We talk of the sagacity of the dog, of the elephant, and of other animals, and although some may define this word when applied to animals to mean only "quickness or acuteness of scent," I cannot look upon that definition as a logical one, or as correctly indicating the sense in which the word is actually used. The animals named, and many others, are capable of being taught, that is, of acting upon a knowledge gained by experience and education; and they therefore exercise a quality, call it what we will, which differs materially from the definition of instinct, and resembles much more that form of intelligence which in man is called "reason."

In the insect division of the animal kingdom the life of the individual is so short that no time can be allowed for the acquirement of experience, and it is here, accordingly, that the operation of instinct is most wonderfully apparent. What bee-keeper has not enjoyed the pleasure of seeing a queen-bee emerge from her cell, perfect and "fully armed," as Minerva is said to have sprung from the head of Jove, ready on the moment to take her allotted place in the hive, to fight a mortal combat with a rival queen, if any such should put in an appearance, to take in a few days her so-called wedding-flight, and then to settle down to her work of laying worker or drone eggs, the right sort in the right kind of cell, and ultimately to provide for her own successor by depositing eggs in the peculiar cells prepared by the worker-bees for that purpose; all this without the slightest preparatory teaching or experience, and all in the same manner as queen-bees have done since the world began, no better and no worse than her progenitors did, perhaps millions of years ago?

[The bee is a much older inhabitant of the earth than man, its fossil remains having been found (at Olninger, Baden) in rocks of the tertiary formation, a geological period of unknown antiquity prior to the appearance of the human race.] But yet, in all her performances as well as in all those perhaps even more wonderful of the worker-bee, there is no want of an intelligent adaptation of means to the end in all the varying cases or circumstances that may arise.

It would perhaps be more correct to say that with insects, as with all the inferior animals, their actions are prompted or started instinctively, but are guided by a more or less developed intelligence, partaking, in some degree at least, of the quality which in man we call reason. The gradations of this quality within the range between what we may call the lowest and the highest of the inferior animals are vastly different, and somewhere between it and the higher reasoning power of man there is, no doubt, a gulf which no power of mere natural evolution can ever bridge across; but each class of animals has been gifted with that degree of intelligence which is suitable for his place in the great scheme of creation. All this is admirably put by Pope in the first part of his essay on "Man:"

"Far as creation's ample range extends
The scale of sensual mental powers ascends,
Mark how it mounts to man's imperial race,
From the green myriads in the peopled grass.

How instinct varies in the grovelling swine
Compared, half-reasoning elephant, with thine!
'Twixt that and reason what a nice barrier
For ever separate, yet forever near."

And again, in the third part of the same poem, with the verses beginning,

"Whether with reason or with instinct bless'd,
Know all enjoy that power which suits them best;"

And concluding with the very striking lines,

"And reason raise o'er instinct as you can,
In this 'tis God directs, in that 'tis man."

Here Pope has hit the mark as to the great and characteristic difference between instinct reason. However deservedly the latter is made to rank as a much higher form of mental development, surely the former must appear, to a reflective mind, by far the most wonderful, and therefore intensely interesting to trace in the actions of the lower animals. In it we can see most plainly the operation of that "Power and Divinity" which St. Paul says, "Since the creation of the world are clearly seen, being visible in the things that are made."

While watching the operations of the bee building its comb, or the spider forming its web, are we not naturally led to feel with the Psalmist that it must indeed be an unwise man who "hath said in his heart, there is no God;" and must we not, while thus witnessing the working of that intelligence which we know cannot be attributed to the insect itself, realize with a solemn feeling that we are brought face to face, as it were, with that Divine Providence all whose attributes are infinite; in whose eye nothing that we can conceive of the vastness of the universe can appear large—nothing that the most powerful microscope discovers to our sense of vision can appear small—and to whom we in common with our humbler fellow-creature, the insect, are alike indebted for existence, and for whatever degree of intelligence, instinctive or reasoning, we are enabled to exercise?

PASTURAGE.

It Pays to Plant Sweet Clover for Honey.

Written for the Western Plowman

BY C. H. DIBBERN.

We would like to have some of the bee-keepers go with us to our sweet clover patch, at any time from daylight till dark, and watch the myriads of bees, busily darting from one cluster of bloom to another, and then claim that planting for honey does not pay! While it is a little difficult to determine just the quantity of honey the bees can gather from an acre of sweet clover, I know too much of the instinct and habits of bees, that all this wonderful activity is not for nothing.

I know that the four acres of this bloom is out of all proportion to the 160 colonies of bees we now have here, to say nothing of stranger bees that no doubt visit us. Had we 20 acres of this sweet clover, I feel sure we would now be doubling up our supers, and we would soon be able to offer our customers as fine an article of sweet clover honey as was ever produced. Where land is cheap, I see nothing that would pay better for bee-keepers, than a liberal number of acres in sweet clover; and what a grand plant it is for improving the fertility of poor clay hills and worn-out lands!

But your timid farmer is fearfully afraid that his lands will become seeded down with this "pest." Well, it does have staying qualities, and that is the best part of it. It is easily gotten rid of, however; just don't let it go to seed for a year or two, and the job is done. Some years ago we gave up a patch, containing about an acre, that had been in sweet clover for 5 or 6 years, and it was turned into pasture. It was a sight to see the cattle nipping the tender shoots as it came up in the spring, and all summer long they kept it close to the ground.

This was 3 years ago, and now you could go over the ground and never suspect that it was once covered with this "pest" higher than one's head, so thick that one could scarcely get through it. Land in our neighborhood sells from $100 to $1,000 per acre, and rents are correspondingly high, and yet I believe it pays me to have a few acres in this excellent bee-plant.

Now, would it not pay those bee-keepers, who have plenty of cheap lands, that would be greatly benefitted by it? Never mind about the seeds; that is all moonshine, and just remember that when you see an occasional stalk of this magnificent plant—showy, fragrant and useful—it has probably crowded out the jimson, burdock, or rag-weed. Yes, sir, it pays to plant for honey!

THE HONEY CROP OF 1890.

"What shall the barvest be?" Well, as far as our choice (white clover honey) is concerned, it will be a very slim one. From many letters received from all parts of the West, I conclude that not one-fourth of a crop will be secured. The only section that seems to be having a fine crop of honey, are the New England States. Well, honey ought to be honey this year, and bring a fair price. Perhaps the rains we are now having will give us a crop of fall honey. At any rate, we must do the best we can, even if we have to resort to the sugar-barrel, to provide stores to winter our bees. The good years will come again, if we but have patience to wait.

Milan, Ills.

CARNIOLANS.

How they are Regarded by an Eastern Apiarist.

Written for the American Bee Journal

BY E. L. PRATT.

My Carniolan bees have done nobly this season, both at swarming-time and in honey-gathering. By "swarming-time" I mean they have not swarmed to excess, as some writers try to impress upon the minds of all their readers.

If it were possible to furnish all pure stock to every man, the praise of this race of honey-bees would be long and loud. The Carniolans will make their way against all that is said in opposition to them. They are a noble race, possessing points, when fully developed, that will totally eclipse all other races of bees.

I am bending every effort to improve them, and each year I can see a marked advancement both in reproduction of traits and markings. The swarming argued so much against them, I am sure can be mastered; I have in my own yard several large colonies that have put in large amounts of honey, and have not thought of swarming. I have in hand several reports from other men where their Carniolans have refused to swarm at all this season—one covering three sections of the Heddon hive, and the queen keeping the combs filled with brood.

The colony which I use for queen-breeding, is the gentlest I have ever had, and although cramped for room all the season, they have refused to swarm. They are the greatest bees I ever saw for crowding into the supers, whether baited or not.

No, bee-keepers, I have no fear but that the Carniolans will make their mark in this country. I can see great possibilities for the race, and a marked advancement under careful breeding. A little time will tell the story. Soon we will be saying, as we do now about Italians—"There is no other race possessing so many desirable points, and so few undesirable ones."

"Purity" should be the watch-word, and I claim that the pure Carniolans should show no yellow. There is a type of Carniolans that, wherever lodged, make Carniolan-converts of the men who possess them, because of their beauty, gentleness, prolificness, and honey-gathering qualities.

Marlboro, Mass.

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LARGE COLONIES.

Importance of Having Strong Colonies of Bees.

Written for the Country Gentleman.

The chief cause of failure in bee-keeping is the weakness of the colonies. The beginner starts with 10 colonies, when two are more than he can handle. They dwindle, but he coaxes them and waits, and at the close of the season, although his colonies are strong, yet he obtains no honey.

It is encouraging to have strong colonies in the fall. There is a better prospect of all-winter life, and more vigor in the spring. But we do not keep bees merely to make them strong for the winter campaign; we keep them to gather honey in the summer. They must be strong in the spring, and be kept strong through the summer.

The man who makes a business of bee-keeping—who wants honey and not increase of colonies—is continually reducing the number of colonies—provided, of course, that there are weak colonies, and there are always, in all apiaries, weak colonies, or colonies weaker than others. These are strengthened by uniting. Here are 3 colonies that lag behind. It is evident that they will only build themselves up during the summer. Each colony is united with a stronger one, or the 3 made into one, and are now ready to render some service.

A small farmer and gardener caught the "bee-fever," and bought "at a bargain" of a disgusted dabbler, 12 colonies of hybrids, set them up, admired them on Sundays, waited till fall, giving them no attention in the meanwhile, except to catch 4 runaway swarms, and then expected to reap a great harvest of honey.

Not a pound did he find. He and the members of his family, and some sympathizing neighbors, passed a unanimous vote that bees were humbugs and ingrates. For their occupancy of a beautiful garden, and for many fine words bestowed upon them, they had returned nothing except an occasional sting. They were abandoned as worthless.

In the spring following, only 7 colonies out of the 16 remained. The bee-keeper wished that none had escaped the winter. Convinced that they had no value, and tired of the sight of them, he decided to unite the 7 colonies, or what was left of them, and place them in a large dry-goods box, the presence of which suggested the idea. The bees were on American frames about a foot square, 9 in a hive. Out of the 7 colonies, or the 63 frames, he found enough—36—with brood, to cover the bottom of the box by placing them upright, shoulder to shoulder, having the space and frames of 4 colonies.

All queens except one were destroyed, and all the bees were united on these frames, after sprinkling them with sweetened water; inch auger holes were bored for an entrance, and they were left to die or to thrive. Late in June the farmer's attention was attracted by unusual activity around the dry-goods box. The bees were not swarming—only going and coming in streams. Opening the box, he saw an immense mass of bees. When the mats, which had been thrown carelessly over the frames to keep the bees down, were removed, the bees "boiled up" till the tops of the frames could not be seen.

The farmer had no faith in them, strong as they were, but if they wished to make up for their laziness in the summer before, he would give them a chance, and he filled the space above the frames with one-pound sections and empty brood-frames. Some of the sections had combs made in the previous season, and all had combs or foundation. At the end of the season, the farmer had taken out of that dry-goods box 430 pounds of honey.

The bees did not swarm—or, if they did, it was when the farmer was not looking. The colony was equal to 4 large single colonies, and if they had remained single, or had been separated, it is safe to say that the 4 colonies would not have produced what the one large one did.

Bees are like other workmen—the greater the number at work on the same "job," the quicker will the job be finished.

Providence, R. I.

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MINNESOTA.

The Bee-Season of 1890 and its Results.

Written for the American Bee Journal

BY S. D. HASKIN.

Last year opened favorably for honey, and as soon as the leaves were out, we saw that the bees worked largely on the leaves, particularly early and late in the day, and close inspection revealed the fact of the presence of innumerable multitudes of the aphides; and as vegetation advanced, the insects increased, with the ever-present ants to do the pumping, apparently.

"Well," says I, "this is something new, at least, to my 15 years' experience in bee-keeping in Minnesota;" I had sometimes remarked that Minnesota is never favored with the honey-dew, so much talked of in some sections, and I observed it day by day, as the season advanced, and through the heat, or middle of the day, the bees worked more on the flowers, and in the evening and morning on the saccharine foliage-drip.

It was not confined to any locality, or class of timber, but on all foliage, even on shrubs and weeds, the insects as well as their product. Sections were filled and capped in June, but oh, my! what dark honey! But through basswood bloom they turned their attention to that, and gave us some white honey; after that the bees went more for red clover, golden-rod, asters, and fall flowers in general, although some colonies persisted in working on the foliage-drip in preference.

Then the wintering problem began to confront me, as the bodies of the hives were chock-full of the early-gathered honey. I winter my bees on the summer stands. Last winter being mild, it gave several flights to the bees, and the snow was much bespattered up every time, but I lost only 2 colonies out of 68, in wintering, which left 66 in the spring, mostly in good condition, and made a fair start for a good season's work, with a great abundance of brood.

But I discovered that the bees were fast using their stores, and although there was abundance of bloom, the bees seemed to content themselves by staying at home and attending to the wants of their numerous families. There was no swarming until June, and then very cautiously; seldom any after-swarms, and they were returned, and nearly one-half of the spring count not swarming at all.

During May and June I gave my bees 500 pounds of honey, of last year's product, in frames, and on several occasions I opened the hives, but I could not see one bit of honey in them, and so I began to think of the wintering again, and it looked as though I should have to resort to feeding, as some will have to do in these parts, as it looks now.

But as July came, and basswood opened, and swarming ceased, they began to build up rapidly, and stopped expelling drones, which they had indulged in more or less all the season. The honey from the basswood was very thin, and the bees filled every available cell in the brood-chambers, so that the queens had to suspend operations until the honey was sufficiently evaporated to keep; it was then removed to sections, but leaving plenty in the brood-chambers for winter stores. This cleared the way again for the rearing of brood, which they are doing bravely, and just now they are zealously storing from buckwheat, which is thick, or heavy, and it is at once put into the sections.

So the hives are stocked with basswood honey for winter, and we will note the result. During the latter part of June, and the first of July, I felt, and said, though I should not get any surplus, that I would not only be satisfied, but very thankful if the bees stored enough for winter, but better than this, the prospect is that we may get perhaps one-fourth of a crop.

Waterville, Minn., Aug. 14, 1890.

Trial Subscribers.—In order to get as many as possible to read the AMERICAN BEE JOURNAL, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

BEES' TEMPER.

Hints to Beginners About Management of Bees.

Written for the Iowa Homestead
BY W. M. BOMBERGER.

Pure Italian bees are the gentlest and most tractable. The common black bee generally has a bad temper. A cross between the two are often vicious and ugly. All things considered, the pure Italian is the best for the amateur, since the disposition and temper of bees are matters of education. It is always best to make the first purchase of bees from an expert, who has handled his bees properly, and who is conscientious enough to give the purchasing amateur, bees of an equable temper. Even in large apiaries there are colonies of bees that have bad tempers.

The first hive should be located in a half shady nook or corner in full view of a constantly used door, and quite near the house. It is surprising how quietly bees will do their work and not molest any one. Their nearness will gradually accustom one to them. They should be fenced, if very small children are on the premises.

A colony of bees, made vicious by improper methods of handling and inhuman treatment is bad, if not worse, than a hornet's nest. Treat bees as you would your best friends. Walk to the hive leisurely with a veil over the face, and a smoker lit and in good trim. Take a location when working over them, so you will not be in the way of bees darting in and out of the hive. With a chisel or hatchet, pry apart, or open such parts of the hive as is necessary in the work, without snapping and jarring parts waxed together. Work with them only on hot, sunshiny days, between 11 and 2 o'clock, when the waxed parts of the hive will give without jar or snapping.

Without discussing the duties of various classes of bees in a hive, it is sufficient to say here that when opening a hive, a certain quantity of bees at the part opened take it on themselves to act as defenders, and drop all other duties. They walk about nervously, quiver their wings, and, if given sufficient cause, dart at the operator and make it decidedly interesting for him.

An expert can manage them without smoking, but an amateur should use smoke. Puff smoke gently in the opening, and, stupefied and scared, the bees will retreat back in the hive and fill themselves with honey, when they become practically harmless; but if it takes time for the operator to make his manipulations, and other bees are disposed to get nervous, give them more smoke. If a few bees (fighters) buzz angrily around your head, walk carefully away from the hive and kill them with a shingle. A few cross bees flying and pestering an operator, can, by their noise and the smell of the venom from attempting to sting clothing, raise the anger of a whole colony or apiary.

If bees do sting and make a person retreat, it is best not to strike with the arms and hands, but run in a direction away from the house, in a straight line, and suddenly make half-circles around trees or brush, making sharp angles in different directions behind them.

Never work with bees when there is an impending storm in the sky, or during a drouth, or when they are idle and the honey-flow is slack. During the height or the active beginning of breeding, in fruit-bloom, their busiest work on white clover, linden, buckwheat and fall flowers, is the proper time to handle and work bees. All work, as near as it can possibly be done, should be put off until then. Such times can be told by the condition of the bloom, and the way the bees themselves behave. In the evening, at such times, there is a loud and grateful hum that bespeaks on their part satisfaction, contentment and happiness. This hum is the sweetest music to the bee-keeper's ear, and we consider it the rarest pleasure to sit on a hive during twilight, and listen to it.

Harlan, Iowa.

FOUL BROOD.

One Method of Treating this Dreadful Bee-Scourge.

Written for the Pacific Rural Press
BY E. H. SCHAEFFLE.

This disease, which is only equaled by the glanders in the horse, in its fatality, has been the cause of a great deal of controversy among the most celebrated of apiarists. The germ theory, which supposes the cause of epidemics and contagious diseases to be due to the agency of specific small germs, and is backed by Professors Pasteur, Tyndall and others, is generally accepted as the true solution of foul brood. Since these scientific microscopists agree that bacillus is the cause of foul brood, and as the germs or spores exist in every part of the hive, pollen, cells, wax, and all the wood-work of the hive, and Prof. Tyndall has proven that 230° F. heat maintained for a quarter of an hour, failed to kill them, the method most generally adapted for the stamping out of the disease, consists in the entire destruction by fire of the entire hive with all its contents of frames, comb, and bees. This heroic treatment would, in many cases, bankrupt the apiarist; and while, in most cases, it would effect the best results, we must look to some more humane and less destructive method. Mr. Chas. F. Muth has, in all probability, come nearer a solution of the difficulty than any other one man, and from his excellent article on "Foul Brood," I condense the following:

"It is gratifying to observe the growing attention paid by bee-keepers to the dangers of the spread of foul brood. Utah has a bee-inspector in every county, and a State officer drawing pay from the State. It would be but a move in the right direction if all the States were to follow the example of our Mormon brethren.

"An abundance of forest trees afford homes for absconding swarms favoring the spread of the disease. Once a number of bee-trees become infected, every bee running over these devastated combs, for years after the death of the colony, is liable to take home to its own hive the germs of the disease. Therefore, be on your guard. The disease is imparted and spreads by contagious spores. It is of vegetable growth, a fungus. Little specks, hardly discernible to the naked eye, are carried along on the legs of bees running over infected combs. Whenever one of these spores drops into a cell containing a larva, the larva dies—soon changing to a brown putrid mass, and foul brood begins its work. Larvæ are affected and die just before the cells are capped, or while bees are performing their usual labor of capping. These cells, a few weeks afterward, are perforated near the center, and easily recognized as disease. Larvæ in uncapped cells, when killed by this disease, settle into the lower corner as a ropish substance, and in time dry up in a hard, coffee-colored mass.

"Bees running over these cells carry the micrococci to a large number of other cells. The putrid stench in the hive becomes so strong that the bees oft-times swarm in despair, taking with them the curse of foul brood. The old bees are not affected, but the young bees being killed off, it soon decimates a colony. Micrococcus dropped into an empty cell will lie dormant for years, and when the queen deposits an egg in these cells, the trouble begins. A crevice in a bottom-board that had been exposed to the weather for a year, being used, the bees running over it, dragged the germ of foul brood into the hive with them.

"To Dr. Schoenfield is due the credit of discerning the true nature of foul brood and its destroyer, while Emil Hilbert found the proper proportions. Mr. Hilbert applies the remedy—salicylic acid—by means of an atomizer, subjecting every bee, comb and cell to the spray, as well as every frame, inside of hive and adjoining surroundings. Several thorough treatments effected a cure. The objection to this method is that bees from other hives carry the spores home with them, thus keeping the disease alive. Mr. Hilbert, however, treats his diseased hives in a closed room.

"After repeated failures, and having destroyed a number of colonies, I tried the following method: I brushed the diseased bees on 10 frames of comb foundation; these I placed in a clean hive, and placed them over a jar of food. The old combs and frames were burned up. This feed was continued until the bees had built out and filled up the combs with brood and honey. Other colonies were treated in the same manner, and all became healthy colonies. All did finely, and there was no more foul brood. I fed these bees, honey with about 25 per cent. of water added, and to every quart of food, an ounce of the following mixture:

Salicylic acid	16 grains.
Soda borax	16 grains.
Water	1 ounce.

"Bees being without food eat it readily. When an atomizer is used on the combs, the medicine should be only one-half as strong. By this method, foul brood can be eradicated without any loss, save that of the old combs and frames."

I have given the method in detail, as it is none too long, and leaves but little to be desired. I would suggest that all of the frames and the inside of the new hive into which the bees are transferred, be sprayed first. The English method consists in washing the hive of the diseased bees in a solution of carbolic acid:

Acid carbolic (Calvert's No. 5)	3 ounces.
Glycerine	3 ounces.
Mix and add hot water	1 quart.

The best plan would be to place the bees to be treated in a hive free from diseases, and burn all of the diseased hives.

Too much care cannot be exercised in the purchase of queens, as those from infected districts are apt to carry the disease with them.

Murphys, Calif.

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A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept. 10.—Nebraska State, at Lincoln, Nebr.
J. N. Heater, Sec., Columbus, Nebr.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Sept. 13.—Susquehanna Co., at Springville, Pa.
H. M. Seeley, Sec., Harford, Pa.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

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International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon..Dowagiac, Mich
SEC'Y. AND MANAGER—T. G. Newman, Chicago

SELECTIONS FROM OUR LETTER BOX

Pond-Lilies and Wild-Rice.

Will some one who lives close to pond-liles and wild-rice, that grow in marshes, tell me if they, or either, secrete much honey, and the quality—whether it will pay to move bees where either abounds in large quantities? C. REYNOLDS.

Fremont, Ohio.

◆

Poorest Season for 35 Years.

This has been the poorest season for bees that we have had in Eastern Ohio since I have kept bees, which is 35 years. I have 36 colonies, and use the Falcon chaff hive. I examined my bees to-day, and am satisfied that they have not 50 pounds of sealed honey per colony in the sections. My customers are asking me for honey every time they see me. I am keeping bees for pleasure, but I think that the pleasure would be much greater if I had a ton or two of honey to sell, instead of 200 or 300 pounds. I winter my bees on the summer stands.

SAMUEL HOLIBAUGH.

Marlboro, O., Aug. 18, 1890.

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Spacing the Brood-Combs.

About May 1, 1890, I found a colony just as I had fixed it to put the boxes on the year before. I often put the swarm on 8 frames, and a division-board each side in a 10-frame hive. A thin strip ¼x1 inch is placed on the ends of the frames, and the boxes put on; so when I find a hive in this condition, I know that I have not lifted a frame after the boxes were put on last year. This old hive is fully 16 inches across the brood-frames, and these division-boards are thin—less than ⅛ of an inch thick. The reader can see here wide spacing, or else room enough for another brood-frame, or else another board. The fact is, the colony did a splendid job last year. No time was wasted on waste comb, or extra gluing up of every thing. It so happened that I went to another hive of a very differect kind ; the smoker had to be in full blast, the frames were solid with burr-combs, the division-boards were 1¼-inches thick, and the hive 14½ inches across the frames. In the discussion of burr-combs one important factor has been entirely left out, and that is, the supreme meanness of some bees. Breed this out of the bees, and space the frames as given on page 398, by Mr. Faylor, and the subject of burr-combs can be put down as settled.

JOHN A. KING.
Mankato, Minn., Aug. 15, 1890.

Poor Season for Bees.

This has been the poorest year for bees that there has been since I began bee-keeping. Ten strong colonies worked for extracted honey gave me only 140 pounds and one swarm. They are all strong and in good condition for winter. The increase from 22 colonies in the spring was 5 colonies.

H. M. SEELEY.
Harford, Pa., Aug. 18, 1890.

Results of the Season so Far.

I have been working 84 colonies this season in four different places. I have 35 of my own at home, and worked nearly all for extracted honey ; the average per colony being 28 pounds—a very light average. Our bees got such a hard blast in May, that I could not get them strong enough by the time our main honey-flow came—clover. We look for no more surplus honey after it is gone. We get a flow late in the fall from aster, which puts them in good condition for winter. The honey we have is very fine, and there is a good demand for it, at 10 cents per pound at home ; and soon all will be sold.

J. G. CREIGHTON.
Preston, O., Aug. 21, 1890.

Bee-Keeping in Nebraska.

Please tell me were the next Nebraska State Bee-Keepers' Convention is to be held. Bees here are gathering but little honey now. It was very dry until a few days ago. We do not expect much suplus honey here. I have 30 colonies of bees, most of them in good condition for the honey-flow, if there is any.

F. C. WHITE.
Farmer's Valley, Nebr., Aug. 13, 1890.

☐ [See the "Convention Notices" on page 589.—ED.]

Wet Weather and Drouth.

The honey crop in this section of the country has been a failure, on account of wet weather in the spring, and the late drouth. Bees have stored but little honey. I am now feeding some of the weak colonies, and unless the fall crop turns out better than expected, I shall probably have to feed all the honey I have.

W. H. KIMBALL.
Davenport, Iowa, Aug. 18, 1890.

Moving Bees to a New Pasture.

I have just shipped a carload of bees to Onawa, Monona county, Iowa, for better pasturage. I hardly know how I will come out yet, but I will report if not too far behind, as I went into this on rather a "wild-goose chase." We have had a severe drouth, so much so that wells, water-works, and everything is dried up ; but we expect it is broken now, as we have had some rains for the last two weeks, and the earth is now beginning to look a little green. Clover undoubtedly is killed out, to a large extent. If the showers continue, perhaps we will save half of our usual crop. The honey is not two per cent. in this county. The fall crop cannot possibly be very much.

J. W. BITTENBENDER.
Knoxville, Iowa, Aug. 19, 1890.

HONEY AND BEESWAX MARKET.

CHICAGO, Aug. 16.—Comb honey is held very firmly this week, and the prices for white in pound sections range from 14@15c, and some fancy at 16c, but the bulk of the sales are at 15c. Demand is quite good, and more could be sold than is coming. Extracted, 6@8c; there are free offerings of California at 6@7c.
R. A. BURNETT, 161 S. Water St.

NEW YORK, Aug. 11.—We quote Southern extracted at 65@70c per gallon; orange blossom, 7@7½c per pound; California, 6@7c. No new comb arrived as yet. Beeswax, dull at 27c, and a further decline is expected.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Aug. 22.—Receipts of comb honey are light, and demand good, at 14@15c for white 1-lbs. No 2-lbs. or dark comb in the market. Very little demand for extracted at present; white, 6½@7c; dark, 5@6c. No beeswax in market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Aug. 21.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, August 6.—Demand is good for the new crop, and receipts are very light. White 1-lbs., 15c.; 2-lbs., 13@14c. Dark 1-lbs. 12@13c.: 2-lbs., 12c. Extracted, white, 7c.: dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Aug. 12.—Very little new comb honey in the market, and it is selling at 14@15c. Extracted, 7@8c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

DENVER, Aug. 7.—Old honey all gone. New crop is arriving freely. Prospect good for a fall crop. We quote: 1-lbs., 14@16c. Extracted, 6@8c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Aug. 15.—New honey is coming in and we are selling at 18c. Extracted, 7@8c. Beeswax, 30c. for fancy yellow.
BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, Aug. 12.—Good demand for comb and extracted honey. Arrivals are insufficient for the demand. We quote best white comb at 14@16c. Extracted at 5@8c. Beeswax is in fair demand at 24@26c on arrival for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

Globe Bee-Veils.—Here are two letters received—from two of our correspondents, and are about like scores of others, showing how the Globe Veils suit those who have them. Not one objection has ever yet been received:

Send me two more Globe Bee-Veils for my neighbors. I like mine very much.—J. B. DUNLAP, Rochester, Ind., July 17, 1890.

The two Globe Bee-Veils came by return mail. Thanks for promptness. I find them just as neat and clean as new (the soiling is so slight). They are indeed *sure* protection against bee-stings, mosquitoes, etc.—JOHN HAGER, JR., Arabi, La., July 16, 1890.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents ; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.

51D26t 1m1y.

Convention Notices.

☞ The Northern Illinois Bee-Keepers' Association, will hold its fall meeting at Harlem, Ills., on Aug. 19, 1890. D. A. FULLER, Sec.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The Cortland Union Bee-Keepers' Association, will hold their Annual Basket Picnic at the Floral Trout Park, in Cortland, N. Y., Tuesday Aug. 19, 1890. Essays will be in order. All come.
M. H. FAIRBANKS, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The Susquehana County Bee-Keepers' Association, will meet at Springville, Pa., on Saturday, Sept. 13, 1890, at 10 a.m. All are invited to attend. I would request every one in the county, who has one or more colonies, to send me their report for the season—number of colonies in the spring, number of increase, pounds of comb honey, of extracted—and of beeswax.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Nebraska State Bee-Keepers' Association will meet in convention in the Bee and Honey Hall, State Fair Grounds, at Lincoln, Nebr., on Wednesday evening, September 10, 1890. Mr. E. Whitcomb, Superintendent of the Bee and Honey Department of the State Fair, will be on hand the entire week of the Fair. He especially desires that every bee-keeper shall make this department his head-quarters. Any honey, or appliances in its production, sent in his care, charges paid, will be properly placed on exhibition. J. N. HEATER, Sec.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, post-paid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

Send us the Names and addresses of any of your friends upon whom you desire to call, to get their subscriptions, and we will immediately send them each a sample copy. In this way you can readily get them for a club.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50. ..	1 40
Bee-Keepers' Review........	1 50....	1 40
The Apiculturist.............	1 75....	1 65
Bee-Keepers' Advance	1 50....	1 40
Canadian Bee Journal.......	2 00 ...	1 80
The 7 above-named papers	5 25....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25....	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
Weekly Inter-Ocean.........	2 00....	1 75
Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

We club the ILLUSTRATED HOME JOURNAL (price 50 cts.) with the AMERICAN BEE JOURNAL for one year for only $1.35. You cannot afford to do without either—the one as an aid to practical bee-keeping, and the other as an invaluable literary and home periodical for the whole family.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

Advertisements.

Voice of Masonry and Family Magazine. Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine Portraits and Illustrations, and a great variety of articles, stories and poems for Freemasons and their families; also Eastern Star, Masonic Gleanings and Editorial Departments. Price per year, $3.00.
JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.

FOR SALE!

An Established Supply Business.

HAS been running since 1869. Present owner is compelled to give it up. Stock so reduced that **$500** will buy what is necessary to the trade. Capital required, from one to ten thousand. Will invoice with reasonable discount, and no charge for the business. The shop and buildings, together with 20 acres of land, can be leased for a term of years. If not sold before Sept. 16, will auction off at that date. Location convenient to both depots.

Terms Cash, or satisfactory security, on time. Have a T-Tin Machine—capacity, 500 complete Tins in an hour; a Given Press, horse power, Saws, Sheeting outfit, etc., etc., and 50 colonies of Italian Bees. Will quote prices or receive bids on whole or part, by mail.

G. M. TERRELL, Jerseyville, Illinois.
(Successor to E. S. Armstrong.)
35A2t
Mention the American Bee Journal.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,

34Atf **J. A. KING, Mankato, Minn.**
Mention the American Bee Journal.

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf

BEESWAX WANTED.

Beeswax.—We will pay **24 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

American Carniolans, From two finest Home-Bred Colonies—only one swarmed this season. Very gentle, good honey-gatherers. Dry weather disposed of drones near me. Select Untested Queens, $1.00. Safe arrival guaranteed.

32A4t E. F. QUIGLEY, Unionville, Mo.
Mention the American Bee Journal.

Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.

The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon...holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00

The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Italian Queens by Return Mail

Tested, $1.00 each.
Untested, 60 cts. each, or four for $2.00.

34Atf **GOOD BROS.**, NAPPANEE, IND.
Mention the American Bee Journal.

Choicest Italian QUEENS!

Purely BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf
Mention the American Bee Journal.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

For Shippers and Retailers.

All boxes printed with your Business Card on front if desired.
Samples and Prices on application.

MUNSON & CO.,

30A13t New Haven, Conn.
Mention the American Bee Journal.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HANDLING BEES

A **PAMPHLET**, treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,
SQUARE GLASS HONEY-JARS, etc.
For Circulars, apply to

CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.
P. S.—Send 10c. for Practical Hints to Bee-Keepers.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

SQUARE HONEY CANS

The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.

They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can	(boxed)	$ .45
12 " Cans	"	5.00
100 " "	"	40.00
1 box of two Cans		.75
12 boxes "		8.40
100 " "		65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

CARNIOLANS

Bees and Queens bred from Pure Imported Stock with great care. Send for circular giving full descriptions. queens in June, $1. Address, **E. L. PRATT,**
PRATT BEE FARM, **Marlboro, Mass.**

Special Hive Circular now ready. Send 10 cents for new method, post-paid. Italian Queens and Supplies. 3Atf

Mention the American Bee Journal.

Extra Thin Comb Foundation.

In 25-Pound Boxes.

WE CAN now furnish the **Van Deusen** EXTRA-THIN Flat-Bottom FOUNDATION put up in 25-lb. Boxes, in sheets 16¼x28 inches, at **$13.75** per box. **12 ft.** to the lb.

☞ The above is a **special offer,** and is a **Bargain** to all who can use that quantity.

All orders for any other quantity than exactly 25 lbs. (or its multiple) will be filled at the regular price—**65 cents** per lb.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

LOOK HERE!

TESTED Italian Queens, $1.00 each; Untested, 75c.; 12-pound Shipping Cases in flat, per 100, $6.00; 2x9 glass for same, per 100, 70c.; per 500, $3.00. Price-List free.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.
Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Sept. 6, 1890. No. 36.

EDITORIAL BUZZINGS.

Dr. A. B. Mason is to award the Premiums at the Michigan State Fair in the Honey and Vegetable Department. He is an expert in these lines, and will do creditable work.

◆

The Award of the Premiums at the Detroit Exposition gave universal satisfaction to all the exhibitors. It is a pleasure to act as "judge" for such an intelligent and agreeable body of exhibitors as were there.

◆

Our Friend, Mr. H. D. Cutting, has done nobly in getting a grand exhibit of honey at the Detroit Exposition, notwithstanding the poor honey crop. He is a *worker*, and the "Management" are to be congratulated upon having secured such an able and reliable Superintendent of the Apiary Department.

◆

The Tri-State Fair will be held in Toledo, O., from Sept. 8 to 13, 1890. We regret to notice that the Premiums in the Apiarian Department have been cut down to $60. Last year, and, indeed, for several years quite liberal Premiums have been offered. This will necessarily cut down the exhibits very much. It is very poor policy to do this, but we understand that the "Management" has gone into other hands—and, we might add, into *greener* hands, in more ways than one. They will likely see their mistake as the years roll on.

What a contrast is presented between the Premiums at Toledo and Detroit—the latter are over $500—nearly ten times the amount of the aggregate Premiums at Toledo. Dr. A. B. Mason is the Superintendent at Toledo, but is in no way responsible for the cut in Premiums.

The Editor having agreed to serve as judge at the Detroit Fair and Expostion, in the Apiary Department, concluded to go to Ohio and visit relatives for a few days, returning by the way of Detroit, and make a short visit to some bee-keepers that might be on the route, as circumstances permitted.

At Medina, Ohio, we stopped over a train to call on our friend and co-laborer, Mr. A. I. Root. We found him busy, as usual, in the management of his large manufacturing establishment and bee-keepers' supply house. His son-in-law, Mr. John Calvert, showed us all over the premises, and although it is now quite extensive, Mr. Root is adding to its capacity by the erection of another large building, in order to accommodate his rapidly-increasing business. He makes almost everything used by apiarists, and it requires much room and machinery, as well as many hands to do it. Ernest was away in New York visiting apiaries, on his bicycle, and so we were disappointed in not seeing him and his excellent wife. The ladies of the "Root" family—Mrs. A. I. Root, Mrs. Calvert (her daughter), and Mrs. Ernest Root—are charming, and the young ladies, the heads of departments in the office, are intelligent and faithful workers in that "hive of industry."

We had an excellent visit there, and as the train we expected to take did not put in an appearance in time for us to make connection with the New York, Pennsylvania & Ohio railway going east, "John" kindly took us in a buggy, and drove to Russel (14 miles). This gave us a chance to have a long visit with him, and see the fine country between these two points. This we enjoyed most fully, and arrived at Kent, in Portage county, on time.

Here Mr. Benj. Harding, our nephew, has a small apiary, but the drouth prevented the bees from gathering honey, and so far only a few pounds of comb honey is the result of the season's operations, where there should have been many hundreds of pounds. Mr. H. resides about two miles east of Kent. In the city, Mr. L. G. Reed has the principal apiary. It is a marvel of neatness, but the same atmospheric conditions have cut his honey crop short.

We were unable to stop over at Bedford, to see Mr. J. B. Hains and Miss Dema Bennett. We saw the apiary, however, as the train was pulling out of that place. We presume Mr. Hains' crop is also short.

At Cleveland we also visited relatives, and then took the steamboat for Detroit. At the Exposition we found a magnificent apiarian exhibit—about double the quantity exhibited last year; it was of excellent quality, and arranged most attractively.

This is written at the hotel, after looking the exhibit over, on Wednesday evening. To-morrow we are to award the premiums, and will give more details of the display next week, after we return home.

The "Management" of the Exposition have been very liberal with Premiums (over $500), and this has made the exhibit what it is. Several of the exhibitors have displayed their whole crops.

Mr. H. D. Cutting (the Superintendent) has been working very hard to get a creditable display; so has Mr. W. Z. Hutchinson, Mr. M. H. Hunt, Mr. O. L. Hershiser, and others. Dr. A. B. Mason and Mr. J. Y. Detwiler are here from Toledo, and to-morrow and Friday there will be a pleasant re-union among bee-men.

◆

A Honey Thief was the heading of an item in the Chicago *Mail* of Aug. 23, 1890, and the account of the honey-stealing was told in the following "short and *sweet*" manner:

> A sweet-looking thief was John Snyder, of Lawndale, as he stood before Police Magistrate Doyle this morning, charged with stealing the honey from the hives of Officer Fairchild of the above suburb.
>
> Said the officer: "I have lost the honey from my hives for the last four years, and I firmly believe that this fellow has been the thief. I captured him the other night while making off with a tubful of the sweetness."
>
> The prisoner, with swollen face, did not deny that he was the guilty party, and he was held to the grand jury on the charge of grand larceny.

Officer Jesse Fairchild is one of our host of readers and customers, and has quite a large apiary which he has run successfully in connection with his official duties for the past few years. We are glad that the bees helped to catch the thief by "marking" him in their accustomed effective way. He will think twice next time ere he tackles the possessions of the hard-working bee.

◆

A Bee-Line is frequently spoken of, and its origin no doubt can be traced to the bees themselves, as they are very strong, and can fly very fast and for a long time without taking a rest. Their eyes are made to see a a great distance, and when away from their habitations they mount up in the air until they see the place where the hives are situated, and then fly toward it in a straight line with great velocity; hence the shortest line between two given points is often referred to as a "bee-line." This habit is taken advantage of by hunters of wild honey, to trace the hives in the woods.

◆

It is a Well Known Fact that bees never visit two or more distinct classes of flowers on the same trip, but always procure a full load of pollen or honey of whichever kind they commence on first, and return to the hive or home to unload before making a change. While this is so, bees frequently visit flowers of the different kinds of clovers on the same trip, for I have seen occasionally a bee go from a white clover blossom to that of the red, then to that of the Alsike, all on the same trip; but the first holds good generally, even with the different kinds of clovers.—*Exchange.*

SEPTEMBER.

BY SOPHIE L. SCHENCK.

A change creeps over Nature. A deep flush
Mounts to the maple-leaf ; the air is clear ;
The grapes are purpling, and a crimson blush
Spreads o'er such flowers as deck the waning year;
Ripe apples bend the trees, while golden-rod,
By roadside, lane and meadow, gayly nod.

Now whistlings of the quail are often heard
From buckwheat fields, while, on the calm air, floats
The drumming of the partridge. Not a bird
Builds now a nest ; but night is thrilled by notes
From crickets near, and locusts' drowsy hum
That seems to say : "September time has come !"
—LADIES HOME JOURNALL.

GLEAMS OF NEWS.

The Toronto Industrial Exhibition, which is to be held from Sept. 8th to the 20th, at Toronto, Ont., has prepared a splendid premium list for its Bee and Honey Department, and Canadian apiarists should avail themselves of this opportunity of making a display which shall be a credit to the industry of bee-keeping in the great Dominion. Regarding the list of premiums, Mr. R. F. Holtermann, of Romney, Ont., writes thus :

I believe that Toronto leads in giving encouragement to an attractive display of honey and bee-keepers' supplies, and for this the Manager deserves great credit, as also does Mr. D. A. Jones. I say that they deserve credit, because there is no doubt this display from year to year has done much in popularizing honey, not only in Toronto, but throughout our broad Dominion.

As will be seen by the appended prize-list, the present year, take it as a whole, is a credit to the committee—Messrs. Vail, McKnight, Emigh and Otter, and the Association. The prizes offered amount to $302, and 3 silver and 3 bronze medals.

By carefully studying the list, it will be seen that every encouragement has been given to bee-keepers who can only exhibit in small quantities. This is as it should be, and will doubtless bring out a great many exhibitors—in fact, I have heard that the exhibit in the honey-building will be greater than any previous year.

There is just one little point of difference which I have—it will be seen that the prizes offered to supply dealers pure and simple, are three silver medals and $7.00. In my humble opinion, this is not as it should be, surely, for bee-keepers go to exhibitions to learn what different appliances are being made, and also what new inventions. It probably pays a supply dealer no better to show his wares irrespective of prizes, than it would the bee-keeper, and we know that in Toronto supply dealers have almost ceased showing ; they say that it pays them better to send out extra circulars for the amount that it would cost them to exhibit.

I regret to see no prize offered for varieties of honey. When only the lightest honey is shown at Fairs, the public are apt to think that anything varying from that color must be impure. But let me repeat, I never saw a prize-list before which, in my estimation, is so well suited to give satisfaction to bee-keepers and the Exhibition Association. R. F. HOLTERMANN.

The following is the Premium-List for "Honey and Apiarian Supplies," referred to by Mr. Holtermann, a copy of which, with the rules governing the same, may be had by sending the request on a postal card to Mr. H. J. Hill, the Secretary, at Toronto, Ont. :

	1st.	2d.	3d.	4th.
Best display of 200 lbs. of extracted granulated honey in glass............	$10	$5	$3	$
Best display fot 500 lbs. of liquid extracted honey, of which not less than 250 lbs. must be in glass, quality to be considered	20	15	10	5
Best display of 500 lbs. of comb honey in sections, quality to be considered	25	20	12	6
Best display of 20 lbs. of comb honey in sections, quality to be considered, that is to say, clean sections and best filled..................................	10	6	4	2
Best display of 100 lbs. of extracted liquid linden honey, in glass, quality to be considered... ....?.	8	5	3	
Best display of 100 lbs. of extracted liquid clover honey in glass, quality considered............................	8	5	3	
Best beeswax, not less than 10 lbs. (manufacturers of comb foundation excluded).....	6	4	2	
Best foundation for brood-chamber..	3	2	1	
Best foundation for sections..........	3	2	1	
Apiarian supplies.....................1.	Silver Medal.			
" " ....2.	Bronze Medal.			
Best style and assortment of tins for retailing extracted honey.........1.	Silver Medal.			
Best style and assortment of tins for retailing extracted honey.........2.	Bronze Medal.			
Best style and assortment of glass for retailing extracted honey.........1.	Silver Medal.			
Best style and assortment of glass for retailing extracted honey.........2.	Bronze Medal.			
Best section super for top story and system of manipulating, product to be exhibited in super as left by the bees	3	2	1	
Best and most practical new invention for the apiarist, never shown before at this Exhibition...............	5	3	2	
Largest and best variety of uses to which honey may be put, illustrated by individual samples of the different things into which it enters as a component ; for example, say one or two samples each in canned fruits, cakes, pastry, meats, vinegar, etc...	8	5	3	
Best and most useful queen-nursery cage	2			
For most tasty and neatly arranged exhibit of honey in the Apiarian Department, all the honey to be the production of the exhibitor. $20 of this prize is given by the Ontario Bee-Keepers' Association............	35	15	10	

◆

Extracted Honey.—The following is on Mr. R. Wilkins' honey-labels :

Honey is one of Nature's purest sweets, valuable both as food and medicine. It has always been esteemed a luxury—the food of kings ; eaten in small quantities with other food it is very nourishing, and favors the cure of pulmonary diseases and colds.

The scientific management of bees, and the use of the honey-extractor, make extracted honey so abundant that all may use it.

Honey is very diversified in its color, taste, odor, and disposition to become candied, or granulated, depending mainly on the variety of bloom it is collected from, and the weather in which it is gathered. Cold weather favors speedy granulation ; its becoming granulated is one of the best evidences of its purity, yet some of the best California honey requires two seasons to become candied.

This honey was gathered mainly from sage blossoms on the mountains of California. Of course, we cannot entirely avoid having it mixed with honey from other flowers. I am sorry that it is impracticable to give our customers positive evidence of the genuineness of our goods unless their own taste is reliable. I merely assert that our honey is pure and good, at the same time realizing that the mere say-so or guarantee of a stranger who is interested in the sale of his goods, is but slight commendation. But I will suggest that our honey comes from the southern part of the State of California, noted for its producing a greater quantity of choice honey than any other part of the world, yielding it here by the hundreds of tons.

Beginnings.—All things must have a beginning, and it is sometimes interesting to look back over the beginning of an enterprise and note the losses, successes and failures. The Knoxville, Iowa, *Express*, last spring, contained nearly a column article concerning the apiary of Mr. J. W. Bittenbender, and in it is given Mr. B's experience for 17 years as follows :

In the spring of 1873 I purchased 4 colonies of bees, and being successful, in the spring of 1875 I had 15 colonies to begin the season with, and in the fall they had increased to 24, and I had sold $300 worth of comb honey, selling it readily at 25 cents per pound.

In the fall of 1875 I invested $150 in bees, in all conceivable kinds of hives, but mostly in straight-framed hives, with holes cut in the top of the frames for the bees to enter the boxes ; but my success was turned to sorrow in the spring of 1876, and only 18 of my 50 colonies were left to cheer me on my way.

I hived the swarms in the empty hives as they issued, with the old comb remaining, and as the season was good, in the fall I had nearly all of my hives filled with a fair crop of honey, giving me about $200.

In the spring of 1877 I suffered a loss of 11 colonies, leaving me with 34, the loss being in the tight-frame hives. Satisfying myself on this point, I began transferring the combs and making kindling wood of these hives, using new hives of the Langstroth pattern only.

As this was a poor season until fall, I had no swarms, but did have a surplus of about 25 pounds to the colony, and the bees had plenty to winter on.

In 1878 there was but little honey until July, when the linden was in bloom, then for two weeks the bees tried to "break their backs," so that I increased them to 49 colonies, and sold about $450 worth of honey, and came out in the spring of 1879 with 45 colonies, and was quite successful until the season of 1883, when so many bees suffered destruction throughout the United States, Iowa being no exception ; but not being discouraged, although suffering a heavy loss, and seeing a prospect of a good honey season, I proceeded to buy up all the bees that were for sale, and succeeded in filling up my hives and receiving fair pay for my season's work.

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Honey-Dew for Winter Stores.—Dr. Southard, of Kalamazoo, one of the brightest and most expert bee-keepers of the day, used to doubt the utility of honey-dew. Several years ago, however, when everybody's bees all over the country gathered so much honey-dew, and were all going to perdition with it in the winter, the doctor thought he would like to know something positive about it ; so he saw to it that 5 or 6 colonies had nothing but honey-dew.

He winters them out-doors, and usually loses but one or two out of a hundred, and, sure enough, the 5 colonies having honey-dew exclusively, wintered as nice as a pin. It has been demonstrated that diarrhea among bees (the one and only cause of winter losses), is not caused by honey-dew nor cider, nor anything of the kind, but by the consumption of nitrogen from bee-bread or floating pollen. Well-ripened buckwheat honey is as good stores for winter as any in the world.—*Exchange.*

◆

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

QUERIES & REPLIES.

Proper Size of Mesh in Wire-Cloth to Exclude Bees.

Written for the American Bee Journal

QUERY 727.—1. How large a mesh of wire-cloth can be used for queen-introducing cages, and be sure that no worker can pass through to injure the queen? 2. Will soldered wire-cloth of ⅛x⅛ inch mesh, made of wire one thirty-second of an inch in diameter, be perfectly safe?—Conn.

I use 14 meshes to the inch.—G. M. DOOLITTLE.

I think it would be perfectly safe.—C. H. DIBBERN.

I prefer a mesh of 12 to the inch.—J. P. H. BROWN.

About ⅛ of an inch mesh, I think.—MRS. L. HARRISON.

1. I think eight to an inch safe. 2. Yes. —A. J. COOK.

We use common window wire-cloth.—DADANT & SON.

I have used no other save the ordinary screen-wire.—J. M. HAMBAUGH.

1. One-eighth of an inch would be all right. 2. Yes.—JAMES HEDDON.

2. I think not. The bees will get hold of the queen through so large a mesh.—A. B. MASON.

The mesh of the wire-cloth usually used for queen-cages is 12 to the inch.—G. L. TINKER.

With that size of mesh, ⅛x⅛, your queen is liable to damage from outside bees.—H. D. CUTTING.

1. I cannot say precisely. 2. Yes, if none of the meshes were enlarged by accident or otherwise.—R. L. TAYLOR.

1. I would use the ordinary black or green screen-cloth. 2. The larger mesh, the more the liability to lose the queen from stinging.—J. M. SHUCK.

What would you gain by such heavy and coarse wire? I have never heard any objection to the common wire-cloth, such as is used for screen-doors.—C. C. MILLER.

I never experimented in that direction, but I see no reason why a mesh ⅛x⅛ would not be safe. But of what advantage is the larger mesh? We *know* the *smaller* is safe.—EUGENE SECOR.

1. I have not experimented on that line, and do not need to. 2. It may be that ⅛x⅛ would be safe, but I would prefer a little smaller. The wire-cloth used for screen doors and windows is about right.—M. MAHIN.

1. I do not know. 2. I should think it would, unless it is meant that the mesh should be full ⅛; then, and in such case, it would be too large. If the mesh is formed partly by the wire, so that the holes would be some less than ⅛, then it would be safe. —J. E. POND.

1. Queens are caged to protect them from the attacks of bees that are likely to be hostile to her at the start. Nothing but fine wire-cloth is entirely safe—not less than 12 meshes to the inch, I should consider entirely safe. If the openings are too large, the bees may pull off the legs of the queen before they become reconciled. 2. No.—G. W. DEMAREE.

1. The common size used for window-screens will do very well. 2. Yes.—THE EDITOR.

Questions Answered.

Charles W. Bolt, of Litchfield county, Conn., sends us several questions relating to matters of general interest to bee-keepers. They are answered as follows by A. H. Duff:

QUESTION—How long is a bee in going a mile; also, how long will it take one to go a mile, get a load from an average honey-plant, return and unload ready to start again?

ANSWER—Bees have been known to fly at the rate of 60 miles per hour, or a mile a minute. But in quest of honey they do not fly so rapidly. On an average they may fly a mile and return with a load every 20 or 25 minutes.

QUES.—Should the brood-frames or combs in brood-frames be kept just ⅞ of an inch apart for comb honey?

ANS.—Brood-frames, or frames of combs in the brood-chamber, should be spaced 1½ inches from center to center. Cut the frames from a board ⅞ of an inch thick, and leave ⅝ space between each frame. This will give 1½ inches for each brood-comb; for surplus honey, use 2 inches.

QUES.—Is enameled or porous cloth the best for all seasons, or is enameled-cloth best for spring and summer?

ANS.—Either will answer. The enameled-cloth will last longer.

QUES.—How is it best to manage in packing for winter when the combs are full of brood? I use the Simplicity hive, and have to take out combs and make room for chaff cushions.

ANS.—I do not consider chaff cushions in the Simplicity hive as any protection in winter. It is best to use large chaff hives and leave all the combs in, except in very weak colonies, when chaff cushions may be used as division-boards to contract the space.

QUES.—What method is best, when no extractor is used, to get the bees to take honey from surplus combs which have but half a pound to two or three pounds in each frame?

ANS.—The extractor is indispensable unless we expose the combs to the apiary, when the bees will clean them out. We think it better to keep them over, and give them next spring to colonies that need provisions.

QUES.—Why is it that Rev. L. L. Langstroth is poor, if he has accomplished so much in bee-culture?

ANS.—Because other bee-keepers "stole his thunder." Father Langstroth's inventions accomplished much for bee-keepers, but not for himself.—*American Agriculturist.*

Are you Going to the Fair? If so, will you kindly send to this office and get a few samples of the BEE JOURNAL, and give them out to your friends there, and get up a club? We will send them to you with pleasure.

A Song of Long Ago.

A song of long ago;
Sing it lightly, sing it low.
Sing it softly—like the lisping of the lips we used to know—
When our baby laughter spilled
From the heart forever filled
With a music sweet as robin ever trilled.

Let the fragrant summer breeze,
And the leaves of locust trees,
And the apple buds and blossoms, and the wings of honey-bees,
All palpitate with glee,
Till the happy harmony
Brings back each childish joy to you and me.

Let the eyes of fancy turn
Where the tumbled pippins burn
Like embers in the orchard's lap of touseled grass and fern;
And let the wayward wind,
Still singing, plod behind
The cider-press—the good, old-fashioned kind!

Blend in the song the moan
Of the dove that grieves alone,
And the wild whirr of the locust, and the bumble's drowsy drone;
And the low of cows that call
Through the pasture-bars, when all
The landscape fades away at evenfall.

Then, far away and clear,
Through the dusky atmosphere,
Let the wailing of the killdee be the only sound you hear.
O, sweet and sad and low,
As the memory may know,
Is the glad, pathetic song of long ago.

—JAMES WHITCOMB RILEY.

CORRESPONDENCE.

FOUL BROOD.

The Disease in Canada, and Recent Legislation Thereon.

Written for the American Bee Journal

BY ALLEN PRINGLE.

I feel that I ought to say something to the readers of the AMERICAN BEE JOURNAL on the above subject. The fact that foul brood is making steady and certain, if not rapid, headway both in Europe and America, is sufficient justification. Within the past few months my own eyes have been opened to the extent to which the disease prevails in this Province, and to the impending danger, unless prompt and proper action be taken for its suppression.

Those who have looked into trans-Atlantic bee-periodicals this season, will have noticed the prominence of the subject of foul brood, and the prevailing alarm at its rapid spread, and persistence against the remedial efforts directed against it. In the United States, as in Canada, the condition is probably no better.

Owing to the fact that many bee-keepers who are suffering from the disease in their yards, very wrongly and foolishly attempt to conceal the fact; and in consequence of the additional fact that many have the disease who are totally ignorant of its nature, and are unaware of its presence with them, the disease is much more prevalent than appears to the public through the periodicals or otherwise.

I have had abundant opportunity of late to verify the above fact. Up to the beginning of this year, never having seen any foul brood, or noticed much in the periodicals in reference thereto, save theoretical discussion of a something which nobody individually appeared to be troubled with—the quite natural impression I had was that a few cases of foul brood existed in Canada, here and there, but not enough to become exercised or alarmed about. This impression was moved somewhat at the last annual meeting of the Ontario Bee-Keepers' Association held at Belleville in January last, and has been completely annihilated since then.

At that meeting it became known that foul brood prevailed extensively in Western Ontario, and was rapidly spreading. With this unpleasant fact in view, the Association took prompt action towards securing such legislation as would be indispensable in any attempt at the complete suppression of the disease in this Province. The fruit of that initial step was that in the space of three months we had secured from the Provincial Legislature, an "Act for the suppression of foul brood among bees," which is probably the most perfect, and, on the whole, the best of its kind in the world to serve the purpose intended.

Under its provisions it became the duty of the Ontario Bee-Keepers' Association, through its Board, to appoint a Foul Brood Inspector, and Sub-Inspector, whose salaries are paid by the Government. This was promptly done, and the inspector has been almost constantly engaged ever since in the discharge of the duties of his position, which I am glad to say he is doing most efficiently and successfully.

As the inspector acts under my direction, as President of the Society, and as the Act requires all owners or possessors of bees having foul brood to give notice of the fact, subject, in default, to the penalties which it provides, my opportunities for acquiring information as to the extent, etc., of foul brood in the Province have been ample. Suffice it to say (and I think it ought to be said) that the disease is widespread, especially throughout Western Ontario, and has made sad havoc in some localities.

The inspector has reported to me that he finds apiaries, one after another, "fairly rotten" with the disease. No doubt the same condition of things exists in the United States, and as this state of things was not known here until unearthed by the effective machinery of the law, it will probably not be known there until brought to light in a similar manner; and as there is considerable interchange of bees and honey between the two countries, we are concerned *there* the same as you are concerned *here*. I therefore feel free in suggesting to our brethren across the lakes and the rivers, the propriety—yea, urgent necessity—of getting to work in these premises, and getting to work at once.

The time for profitless theoretical discussion about the essential nature of the disease, and the *modus operandi* of this plan of drug treatment and that, is, or ought to be, past. Like many diseases which afflict the *genus homo*, this bee-disease may be cured by a simple, natural process, without any drug-medication of any kind.

While our law authorizes the destruction by cremation of every colony virulently diseased, our inspector, Mr. Wm. McEvoy, although he has had hundreds of cases to deal with, mild and malignant, since he commenced, has not as yet been under the necessity of destroying a single colony. With the willing and intelligent co-operation of the owners he can cure all cases. This fact speaks for itself, and ought to command the attention of all who unfortunately are personally concerned in foul brood.

By this mail, I send to the office of the American Bee Journal, a copy of our foul brood pamphlet, recently issued as an official "Bulletin" by the Ontario Department of Agriculture. This pamphlet contains our inspector's method of treatment and cure as practiced by him. It also contains Mr. D. A. Jones' "starvation plan," which is the same in principle, only differing in detail. That the worst cases of foul brood may be cured by either of these methods is now proved beyond a doubt. Hence the folly of persisting in treating and experimenting with this drug or that, bees dying and disease spreading meanwhile.

I wish to draw the particular attention of the American Bee Journal to this "Bulletin." It not only contains the two successful plans of treatment as practiced by Messrs. Jones and McEvoy, but a copy of the Act under which we are working so effectively towards the suppression of that foul disease which is the withering vampire of bee-keeping.

This Bulletin, printed in English and German, is now in the hands of some seven to eight thousand Ontario bee-keepers. I would suggest to American bee-periodicals, to give their readers the benefit of its contents.

Allen Pringle,
Pres. Ont. Bee-Keepers' Association.
Selby, Ont., Aug. 14, 1890.

HORTICULTURE.

The Relation of Bees to Horticulture Considered.

Read at Nebraska Horticultural Society
BY REV. EMERSON T. ABBOTT.

I congratulate the Nebraska State Horticultural Society and the State Bee-Keepers' Association on the harmony found among them, and the fraternal feeling which they manifest toward each other.

You both have cause to be proud of the progress you have made, and of the push and intelligence manifested by your individual members. When I heard the able essay which Prof. Bessey read before the joint meeting last year, and saw how much interest he took in the work of the Horticultural Society and the Bee-Keepers' meeting, I felt that both societies had a friend that they could not value too highly. But I digress.

I was speaking of the harmony and good-will which prevails between these two societies. This stands for more than one realizes at first thought. No greater misfortune could come to a country than for its inhabitants to divide themselves up into societies, guilds, or castes, all of which are arrayed against each other, and endeavoring to build themselves up by denouncing and tearing others down.

Given this condition of things, and society instead of being one united whole, working for the common weal in a general way, at once becomes a lot of petty factions who have no interest in the welfare of any one, or anything, that does not belong to them exclusively.

It is plain to be seen that this state of things would soon pervert and overthrow the institutions of a free government, and lead to anarchy in its worst form. Instead of happiness and contentment, we would have on every hand strife, contention, and discontent, coupled with the meanest kind of selfishness.

This evil tendency, I am sorry to say, has and is in some quarters yet manifesting itself among the fruit-growers and bee-keepers of the country. Faint mutterings of a conflict of interest have been heard all over the land, and here and there these almost silent complaints of conflict have waxed louder and louder until they broke out in open denunciation, and a bitter warfare has been the result.

On the other hand there have been communities and societies like your own, who have been willing to bear and forbear, and to labor patiently and harmoniously to get at the facts in the case. These manifestations of fraternal good-feeling have not been without their influence, and it now seems that the time is not far distant when these two societies, like the lion and the lamb, will lie down together in peace; or at least will be content to eat grass in the same pasture, or regale themselves with sweetness from the same flower. In confirmation of these statements I quote an extract from the *Orange Judd Farmer*, referring to a fraternal meeting of fruit-growers and bee-keepers in Columbus, Ohio, not long since:

> The bee-convention was invited by the Secretary of the Ohio State Horticultural Society to visit the horticulturists then in session in the same building. The horticulturists were discussing the question of fruit fertilization by insects, and the bee-men joined heartily. It was decided that the little, busy bee is a very useful insect to the fruit-grower in the way of aiding nature in the fertilization of flowers.

I will have something to say about this further on; but will remark here in passing that this may not be spoken of as an aid to nature, but a part of nature, as I think it was so intended in the Divine plan of things. But to quote further:

> The feeling between the fruit-growers and the bee-keepers is becoming more friendly every year. They are both beginning to see the necessity of the other for the best results in their respective lines of labor.

Let us see if we can get at the cause of this misunderstanding; let us look for a short time into the facts bearing on the case as they are related to each party, the bees and the fruit, and see if we can offer any suggestion to help solve this problem more completely, and promote further this feeling of friendship and good-will.

IGNORANCE REGARDING THE BEE.

The cause of a large amount of this trouble may be expressed by the word *ignorance*, in the literal meaning of the word ignorance, "not knowing." We use the word generally in a bad sense, meaning to cast reflections upon the party to whom we apply it. This may be explained as willful ignorance; but this is not the kind of ignorance to which I attribute most of the trouble. It is true there are some people who are culpably ignorant of facts, or who at least ignore all facts, if they are not ignorant of them, and go on trying to make trouble and stir up strife and contention. But the ignorance I refer to is that which grows out of want of contact with the facts and their surroundings. There is too much in the world for one man to learn it all, and there are many things that we go through life ignorant of, simply because the occasion for investigating them has never come up; and then again there are some things we do not investigate because of the difficulties surrounding such an investigation.

On the side of the bees, I confess that this question has some difficulties that are very much in the way of an examination, and people who have no interest in investigating are very apt to stand at a respectful distance and take their knowledge at second hand. Now second-hand knowledge is not so apt to be accurate, and the knowledge not being accurate, the party draws wrong inferences, and arrives at adverse conclusions; and the beginning of trouble is at hand.

But we will not jump at any conclusions. I know a little about the bees at first hand, and will try to tell you what I know; and you, gentlemen of the Horticultural Society, know something about the fruit, so if I do not do justice to it, you can set me right on that point.

BENEFIT OF BEES TO FRUIT.

Let us see first if the bees are any benefit to the fruit, as a balance against any injury they may do it, if in the end we find that they ever are an injury. In order to discuss this part of the question, it will be necessary for me to go over some of the ground covered in my essay of last year before the bee-keepers, and also discussed in part by the able paper of Prof. Bessey before the joint meeting.

Blossoms, by their color, odor, and nectar, attract insects in great numbers, and the insects draw nourishment from them. It is evident, then, that the flowers are useful to the insects. The question arises, are the insects of any use to the flowers?

It does not seem that the flower would put on its gorgeous robe and throw out its delicate perfume upon the free air to entice the insect, and continue to secrete the precious nectar in its bosom to regale the appetite of the visitor, if it were to derive no benefit therefrom. Nature is largely constructed on the plan of utility, or, as Prof. Gray has put it: "Where free lunches are provided, some advantage is generally expected from the treat."

So we are led to inquire, what advantage can the plant derive from the visit of the insect to the flower? At the risk of repeating some things that you are all familiar with, I desire to state a few elementary facts of botany.

BOTANICAL STRUCTURE OF FLOWERS.

First, let us see if we can learn how a flower is made, and what office its various parts are intended to perform. Of course there is an endless variety of flowers, varying greatly in color, form, etc., but all ordinary flowers are composed of about the same parts, and these parts exist, more or less, for the same purpose.

Take, for illustration, an ordinary flower: It is composed of an outer whorl of leaves, generally green, called the "calyx." Inside of this is another whorl of leaves, which are frequently highly colored and very beautiful, called the "corolla." Inside of these we have another set of organs, called "stamens." These vary greatly in number in various flowers. On top of them is an organ called an "anther," which contains a fine powder called "pollen." This pollen carries the male element of the flower, or the sperm-cell.

Inside of these, in the centre of the flower, we find another organ, or there may be more than one, called a "pistil." This pistil is composed of three parts. The upper part is called the "stigma," the middle part the "style," and the lower part the "ovary."

This ovary is a hollow case, or pod, that contains rudimentary seeds called "ovules," in which is found at the proper time the embryo-sac that contains the germ-cell, or female element of the flower. So that here within these whorls of leaves the highest energies of vegetable life are concentrated, and the ends of that life accomplished.

Now, the sperm-cell, referred to above, must be brought into immediate contact with the germ-cell, or else no fruit will ever be produced. As I said before, the sperm-cell is found in the pollen of the anther, and the germ-cell in the ovary or ovules of the pistil. Why nature is so organized that it requires the union of these two elements to produce growth and development sufficient for the production of another perfect organism, is one of the inscrutable mysteries that will no doubt forever remain in the mind and heart of Him who, in the beginning, let that be when it may, "Spake and it was done, commanded and it stood fast."

The question is, how are these two elements, or protoplasmic germs, to be brought together. Where all of the organs are found in one flower, as in the one described above, with no obstruction between them, and they come to perfection at the same time, the process is a very simple one, yet full of interest. A gentle movement of the wind, after the anther has ripened and gotten ready for the process, and the potent grains of pollen, freighted with their life-awakening germs, come showering down upon the receptive stigma.

Presently there is formed what is known as the pollen-tube. This begins to grow downward through the style in the form of a thin filament, enters the cavity of the ovary, and finds the orifice of an ovule, and, guided by some mysterious yet unerring power, makes its way to the embryo-sac which contains the bioplasmic something that we have called the germ-cell, or female element of life, and they immediately form a union.

Movement, growth, and cell formation commences, for all plant substance is only a multiplication of cells, and thus is formed the fruit and seed in which lies beautifully folded the embryo plantlet of the future tree, bush, vine, or whatever it may be.

THE POLLINATION OF FLOWERS.

So far we have not seen any use for the busy bee; but some plants are so arranged that the process of pollination is more complicated, though the act of impregnation or fertilization is the same after the pollen reaches the stigma. They are so constructed that the pollen cannot reach the stigma, even though in the same flower.

Then again, the pollen-dust of some flowers is so constituted as to be of no use to the pistil of its own flower. In a great number of flowers the stamens and pistils are not fully developed at the same time. Then, many plants have two kinds of flowers—one kind with stamens only, and the other with pistils only, and sometimes these flowers are on entirely different plants. So that there seems to be a great many things in the way of the plant doing the very thing that is essential to the fulfillment of its being, and we must look for some other agency to bring these two elements together, or secure what we have called the pollination of the flower.

But, you say, if everything is arranged in nature to be in harmony and work perfectly, why were they not both always placed on the same plant and in the same flower, where they could not fail to come in contact? This brings us to another and very important part of our subject. Not only pollination is desired, but pollination in such a way as to secure *cross-fertilization*, and thus prevent what the stockmen call "in-and-in breeding." Just here comes in the work of the bees. In their visits to the flowers they carry pollen from flower to flower, and thus do for the plant that which it cannot do for itself. This explains why the plant secretes the nectar and throws out many other inducements to insects, principally bees, to pay it a visit.

The importance of cross-fertilization is not to be underrated in discussing this question of the benefit of bees to the plant. Mr. Darwin has shown, by a long series of experiments, that self-fertilized plants, that is, fertilized by their own pollen, are generally very much inferior in vigor and power of constitution to those that are cross-fertilized. So, you see, if we are to have healthy and fruitful plants and trees, we must avail ourselves of the work of the bees.

Many fruit-growers and gardeners have been aware of these facts and made use of them. We are informed that the gardeners in the vicinity of Boston keep bees that they may secure the perfect fertilization of their fruit and plants.

Mr. A. I. Root found a green-house in New York where bees were kept at work all winter to save the otherwise laborious and expensive mode of hand-fertilization. The experience of the Australians with red clover, and the fact that they imported bumble-bees to secure its fertilization, is no doubt familiar to you all.

Darwin long ago made mention of the fact that the bees were necessary to a good crop of clover seed. He threw out the following suggestions why better clover seed could be secured near a city:

The greatest enemy to the bumble-bee is the field mouse. If the mice are kept at bay the bumble-bee will flourish. In cities more cats are kept than in the country, and they are the enemies of the mice. Some fearless wag has suggested that a city which contains an unusual number of maiden ladies, who are said to favor cats, will be still better than one without them. The inference is, if you want to secure plenty of red clover seed, go near a city where there is a superabundance of old maids!

Some one may ask why this mixing up of the pollen of various plants will not create great confusion in the vegetable kingdom, by the production of hybrids, etc. It was observed by Aristotle more than 2,000 years ago that bees visit the flowers of the same species as long as they can. This has been confirmed by the observations and writings of many in modern times. The bees work only on one kind of a flower at a time.

INSECT FERTILIZATION OF BLOSSOMS.

I am well aware that the wind and other insects are a great aid to plants, by way of securing cross-fertilization, but at the same time it is quite plain that if it were not for the honey-bee, many trees and plants would bear no fruit at all. Such fruits as cherries, apples, pears, peaches, raspberries, and strawberries, are almost entirely dependent upon the bees for perfect pollination. In the case of very early cherries and apples there are no other insects flying. When it is too cold and stormy for the bees to get out during the flowering of these fruits, we always have a very poor crop. This would lead one to conclude, if we had no other evidence, that the bees have something to do with the production of a good crop. Therefore I think we have established the fact that the bees are a benefit to the fruit-grower, and in many ways aside from the production of honey and wax.

It is no doubt true that if more bees were kept, there would be larger and better crops in many an orchard and garden. If it were not for the bee, many a beautiful flower would fall to the ground and perish without having produced any fruit. In view of these facts we may well change the language of the poet, and make him say:

How doth the little, busy bee
  Improve each shining hour,
While gathering honey every day
  To fertilize each flower.

DO BEES INJURE FRUIT?

We now come to the question of vital import, *Do bees ever injure fruit?*

I am not ignorant of the fact that very much has been laid to the charge of the bees. We are sometimes told that bees eat grapes as ravenously as chickens eat worms, never stopping until they have destroyed whole vineyards. We occasionally hear of them devouring crates of peaches and various other fruits. We have not had any report yet as to their capacity for eating corn and pumpkins; and the vines and trees after they have made way with the fruits thereon; but then this is an age of discovery, and we cannot tell what may come to light. I am aware that bee-keepers sometimes make claims that they cannot substantiate with the facts.

As able and reliable a writer as Prof. Cook, says in his "Manual," that "*Bees never bore for nectar, but seek or even know only of that which is fully exposed.*" However, he modifies this statement by saying that Dr. C. V. Riley feels sure that bees are sometimes thus guilty.

The prevailing testimony seems to be that as a general thing bees do not perforate flowers, yet a number of scientific investigators claim that they do, and a bee-keeper of no less repute than Mr. A. I. Root says that he saw the Italians bite through the spur of a wild touch-me-not. While this is true, yet it remains a question whether these openings prove to be a real injury to the flowers, except that they enable the insect to get the nectar of the flower without securing its pollination, and thus the flower proves to be sterile, not because the bee visited it, but because it did not reach the nectar in the way that made it do for the flower what it could not do for itself without the aid of the bee.

So that perhaps Prof. Cook is not far out of the way when he says, "That bees ever injure blossoms, and thus effect damage to the fruitage of such plants as buckwheat—or to any plants, as is sometimes claimed—is utterly absurd, and without foundation."

While we may not all indorse this strong language, yet I think you will all agree with me in the statement that, on the whole, the busy bee is a great benefit to the flower, and rarely, if ever, an injury. But the main ground of complaint has not been that bees injured the flowers, but the fruit itself, especially the grape. Men have been so certain of this that the bees and grapes have had one or two lawsuits, but I believe that so far as heard from the bees are yet "on deck."

EXPERIMENT WITH BEES AND GRAPES.

You may not all be aware of the fact that the government has a special agent who is employed to make experiments in apiculture in all of its ramifications. This man, Prof. McLain, has no "axes to grind," and so we are more likely to get unbiased statements from him than from any other source. Under special instructions he has been making extensive experiments in this direction, and has made two or more elaborate reports on the subject.

In one of them he says: "I have repeated my experiments of last year for testing the capacity of bees to injure fruit." He confined two colonies of Italian bees, two of hybrids, and two of Syrians, in a house and endeavored, by heat, etc., to bring about all the conditions of a severe drouth. He says:

> The bees were repeatedly brought to the stages of hunger, thirst, and starvation, the test continuing for 40 days. I obtained 13 varieties of choice grapes, and every inducement and opportunity was afforded the bees to appease their hunger and thirst by attacking the fruit which was placed before them. Mark this: Some of the bunches of grapes were dipped in syrup and hung in the hives between the combs, some placed before the hives on plates, and grapes were suspended in clusters from the posts and rafters. The bees lapped and sucked all the syrup from the skins, leaving the berries smooth.
>
> They daily visited the grapes in great numbers, and took advantage of every crack in the epidermis or opening at the stem, appropriating to their use every drop of juice therefrom, but they made no attempt to grasp the cuticle with their mandibles or claws. I removed the epidermis carefully from dozens of grapes of various kinds, and placed them on plates before the hives. The bees lapped up all the juice on the outside of the film surrounding the segments of the grape, leaving this delicate film dry and shining, but through and beyond this film they were unable to penetrate.
>
> I punctured the skins of grapes of all kinds by passing needles of various sizes through the grape, and placed these before the bees. The needles used were in size from a fine cambric needle to a jacking needle. The amount of juice appropriated was in proportion to the size of the opening in the skins and the number of segments of the grape broken. The same was true in the case of grapes burst from over-ripeness. Bees are not only unable to penetrate the epidermis of grapes, but they also appear to be unable, even when impelled by the direst necessity, to penetrate the film surrounding the berry even after the epidermis is removed. Grapes so prepared, without exception, lay before the hives until dried up.

He further says that clusters of sound grapes which he hung in hives with strong colonies for 15 days, remained sound and unbroken at the end of the time. He then stopped the entrances of hives containing strong colonies by pushing sound grapes into the openings, and confined the bees in the hives in this way for days in succession, and the skin of the grapes was not broken. He sums up his report by saying:

> During the last season I made many visits to vineyards, and my observation and experience with bees in confinement, and those having free access to vineyards, furnish abundant proof to convince me that bees do not and cannot under any circumstances injure sound fruit.

This has also been my own experience. One year I had 150 colonies of bees, and harvested a fair crop from two acres of grapes that grew along by the side of my apiary, just over the fence, and we had no trouble with the bees whatever.

Yet I do know that there are some seasons when it is very dry, and the grapes are left on the vines until they are dead ripe, for the purpose of making wine out of them, when the bees fairly swarm in the vineyard, and become almost, if not entirely, a nuisance for the time. But even then they only work on the grapes that burst from over-ripeness, or that have been torn open by birds or other insects.

But on such an occasion the grapes are as much of an injury to the bees as the bees are to the grapes, and it is simply a question of previous location as to who should move or be declared a nuisance.

Any one who will examine carefully the jaws or mandibles of a worker-bee will see at once that they are not made for cutting hard, tough substances, and this is one of the very best evidences that they are not in the habit of doing it; for in the entire economy of nature we find all organs adapted to the work they are required to perform. It is true that a bee's mandibles are very strong, and they can press very hard with them, and they use them constantly in molding wax and propolis; but they are not sharp, are not toothed, nor made in any way that would indicate they were designed for cutting.

BEES NEVER INJURE SOUND FRUIT.

In view of all these facts, I am forced to take the position that bees never injure sound fruit. However, I am conscious that notwithstanding I, with many others, have reached this conclusion, yet we will continue to hear complaint against the bees for a long time to come, and much strife and contention will yet arise before this vexed question is finally settled.

This leads me to the question of a remedy. A meeting like we had here last year, or the one at Columbus to which I referred, is one of the best remedies known to me. Let those who are interested get together and discuss this question in a friendly way, and then get at all of the facts in the case, and much that now seems dangerous will, in my opinion, be found to be perfectly harmless. In a word, my remedy is *education*. Knowledge is always power, and the saying will be especially true in this case—*learn more at first hand!*

I feel that I have made a very hasty and imperfect survey of this subject; it is too large to be treated fully in one essay. Yet I trust I have presented some facts, standing in the presence of which Nature seems larger than before; and we find ourselves seeing with keener eyes, harmony and order come out of what seemed to be only chaos, confusion, and discord. We hear again, with new meaning, the angels' song of "Peace on earth, good will to men."

In a world where there is room enough for *all*, all should be willing to give *all* the benefit of that room. So let us then, horticulturists and bee-keepers, join in the poet's song of—

WELCOME TO THE HONEY-BEE.

"Come, honey-bee, with thy busy hum,
To the fragrant tufts of the wild thyme—come,
And sip the sweet dew from the cowslip's head,
From the lily's bell, and the violet's bed,
Come, honey-bee:
There is spread for thee
A rich repast in wood and field;
And a thousand flowers
Within our bowers,
To thee their sweetest essence yield.

"Come, honey-bee, to our woodlands—come;
There's a lesson for us in thy busy hum.
Thou hast treasure in store in the hawthorn's wreath,
In the golden-broom, and the purple heath;
And flowers less fair
That scent the air
Like pleasant friends, drop balm for thee;
And thou winnest spoil
By thy daily toil,
Thou patient and thrifty and diligent bee."

Permit me to make one remark in conclusion that does not relate exactly to my subject, but rightly grows out of it, I think. In religious matters I am inclined to be very liberal, and give the utmost liberty to others; yet it seems to me that no man can study carefully the part the bee plays in Nature, and kindred facts, without being forced to the conclusion that there is a "Power not ourselves" behind Nature "which makes for righteousness," whether he agrees with me and call that power God or, not. To me all this is the manifestation of an Infinite Father, and I would it might be to all men.

St. Joseph, Mo.

MINNESOTA.

The Poorest Season in 21 Years —Nectar Secretion.

Written for the American Bee Journal

BY C. THEILMANN.

So far this has been the poorest season for honey that I have experienced in 21 years of my bee-keeping. I have as yet not one pound of surplus honey, and only one swarm (which I hived for an experiment), though I had a number of swarms which I put back, as they could not make their living without being fed.

I had to feed all of my bees (225 colonies) up to the forepart of July, when linden came into bloom; they got a little more than their living on it, and have gained but little in stores up to the present, but most of the hives are full of bees and brood. They have all the way from almost none to 15 pounds of honey in the brood-chamber.

Buckwheat and many fall flowers are in bloom, but there seems to be but a slow gain of honey in the hives, while the bees, seemingly, are hard at work, with apparently the best of weather for honey-secretion for the past two weeks, in which time we had a number of nice rains; the ground is now thoroughly soaked, and if frost keeps off for three or four weeks, we may have a honey-flow yet; but it is quite cool. This forenoon the thermometer showed 36° above zero; yesterday 40°, and at noon the bees dropped down before the hives, stiffened with cold, and many perished.

Almost all the bee-keepers that I have met would gladly sacrifice their surplus if their bees would only get enough for winter stores. Last year this county produced about 150,000 pounds of surplus honey, and this year I do not think that there will be 500 pounds, as I have heard of only one man who has one case of finished honey in the whole county!

This county has never failed heretofore to yield a surplus crop; but we have never had such extreme weather. The continued cold and wet weather in June, and the high floods, followed by the big storm which capsized the Sea Wing, in Lake Pepin, have done great damage to the fields and honey-producing plants and trees. Small grain was badly blown down, and in some streaks it was totally destroyed by hail. Many of the honey-plants looked as if the fire went through them, and were crippled and stunted.

That storm, more than any one that I have ever noticed, has shown the fatality to the production of nectar. The electricity in the atmosphere, when exploded in connection with heavy rain, seems to destroy the nectar-giving properties, as honey-secretion stopped after the storm almost entirely for a number of days. It is clear that the atmospheric conditions have more to do with a honey-crop than the flora itself.

This brings to mind another question, namely: Do not these very same conditions bring forth bark or plant lice—and *vice versa*? Or is it that they bring forth honey-dew, and the lice follow?

One thing is shown plainly by this season's observation, namely: We have not seen or heard of any honey-dew, nor bark or plant lice in any of the localities where there is no honey, or where the non-producing atmospheric conditions were absent. This clearly shows that these conditions and real honey, honey-dew, and plant-lice are in close proximity, which science has not yet unveiled.

Theilmanton, Minn., Aug. 22, 1890.

AGE OF BEES.

How Long Queens, Drones and Worker-Bees Live.

Written for the American Rural Home

BY G. M. DOOLITTLE.

Nothing in the bee-business has given me more pleasure in the past than experimenting to ascertain the different ages of bees, and the different offices they perform at certain ages, when in a normal condition.

When these conditions are not complied with, the colony is thrown out of balance, and in that unbalanced condition we find that bees will feebly perform any office of the hive till they can arrange matters normally again. Then it is that we find very young bees going to the fields, when they will bring less than one-half the load that the bee over 16 days old will carry; old bees will rear queens which are not half the value of those reared by the younger or nurse bees, and some will even lay eggs, while this office is usually restricted to the queen.

In these experiments, I have found that queens reared under the most favorable circumstances attain the average age of four years, even under the "forcing process" now used to get all the bees possible in the hive at all times, which is recommended by nearly all bee-keepers of the present day.

On one occasion I had one queen that lived and did good work till she was nearly six years old, laying prolifically until within about three months of the time of her supersedure; while several have lived to be about five years old.

The worker-bee rarely attains to a longer life than 45 days, during the months of June, July, August and September, while those hatched in September live until the next May and June, if not injured by our winters, their life being prolonged above the 45 days, just in proportion to the work they do, or the amount of hardship they are required to undergo. In no instance can a worker-bee survive a full year.

The life of the drone is about the same as that of the worker, under favorable conditions, but a very precarious life he lives; for, if a scarcity of honey prevails, and the bees are not fed by the apiarist, the drones are unmercifully driven from the hives, or killed by the workers. I have seen it stated that the drones do not live one-half the time the workers do, the proof of which was the writer's experiments with a nucleus colony. This individual should know that drones have the privilege of entering, unmolested, any hive that allows its own drones to remain, and that if they are driven from one hive, they are allowed to enter another which is retaining its drones. Such has been my experience for years.

A nucleus having a queen just fertilized has no more need of drones, and persecutes them until they leave; or if they persist in staying, kills them. With an isolated hive, my position, that drones live about 45 days during the working season, can be proven.

Many seem to think that drones never live over the winter, which is the rule, though not always the case, for at two different times my hives have been so well supplied with honey during the fall and winter, that the bees did not seem to realize any need of retrenching, so kept their drones, which were flying every fine day during the fall and winter, the excess of honey causing the bees to allow them to live as long as life held out. It was really amusing to hear their merry hum from many hives on warm days during February and March. As the pleasant days of April came on, they gradually grew less and less, until all were gone about the middle of that month.

Borodino, N. Y.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Sept. 10.—Nebraska State, at Lincoln, Nebr.
J. N. Heater, Sec., Columbus, Nebr.

Sept. 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Sept. 13.—Susquehanna Co., at Springville, Pa.
H. M. Seeley, Sec., Harford, Pa.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich
Sec'y. and Manager—T. G. Newmau, Chicago

SELECTIONS FROM
OUR LETTER BOX

Heart's-Ease and Golden-Rod.

We had a fine shower of rain here last Saturday, and my bees are booming on heart's-ease and golden-rod. I do not see many bees on the golden-rod until nearly noon, but they are busy on the heart's-ease as soon as the sun begins to warm up thoroughly. I have secured about 25 pounds of extracted honey up to date per colony, and if the weather continues good for the next two weeks, I can report better.

W. H. Martin.

Elkhorn, Nebr., Aug. 26, 1890.

Bee-Keeping in Nebraska.

Bees in central and western Nebraska have suffered severely this summer on account of excessive drouths. This extends some little distrauce east of Columbus, beyond which I think that bees and crops have suffered less, and more favorable reports will be given from those sections.

Owing to melilot and alfalfa clover (of which I have 50 acres on my own farm), I am happy to report 600 pounds of extracted, and nearly 100 pounds of comb honey, and the brood-chambers full of choice winter stores; while other bee-keepers report starvation and robbing. To-day bees did not attempt to touch honey exposed to them, because melilot and alfalfa gave them a more palatable repast than that. The above report is of 12 colonies for extracted, and of but 3 colonies for comb honey.

I have 12 colonies more, which have done nothing as far as surplus is concerned, but these weak colonies are strong now, and have all the winter stores they need, and more too. So they may give me considerable surplus yet, provided we get sufficient rain.

The extensive beet-sugar factory within 240 rods of my apiary, will be in full blast very soon, and I fear will seriously injure my bees, and destroy my apiary. I will report later as to the effect that this beet-sugar factory will have on my bees.

William Stolley.

Grand Island, Nebr., Aug. 27, 1890.

Working on the Cotton Bloom.

Since July 10, bees in this locality have done so well, I thought a notice might be of interest to some of the many readers of the Bee Journal. The cotton bloom seems to be outdoing itself this year. Good colonies are quite rich with a honey of light-amber color, and a splendid flavor. I wonder if our cotton will not rival Northern white clover? If we get the usual after crop, there will be no ground for complaint. I will report later.

A. L. Beach.

Pineville, N. C., Aug. 19, 1890.

Gathering Honey Rapidly.

For the last ten days bees have been storing honey, and finishing up sections that were left unfinished at the close of the linden bloom. Abundant rains of the last few weeks have secured for us already a fair fall crop of honey, and bees now have their hives chock-full of honey and young bees. I had one fine swarm come off last week, and expect more shortly. Generally we save a lot of empty combs to hive late swarms on, when there is honey enough in the fields to bring on swarming. There will be honey enough for new swarms to obtain enough for wintering purposes, and to-day my 61 colonies are just humming, as though it was during the linden bloom, and I presume it will last all through the month of September.

J. M. Young.

Plattsmouth, Nebr., Aug. 25, 1890.

My Experience with Bees.

I wintered 6 colonies of hybrid bees in this way: I placed a large box on each hive, allowing a space of about 5 inches, which I packed with chaff and sawdust. I used "Hill's device" over the brood-nest, and then a burlap cushion filled with chaff. All wintered well, and came out in a healthy condition. Owing to a very wet, cold spring, breeding was late, and then we had very hot weather, which dried up the nectar in the flowers. The weather is fine now, and the bees are doing fairly well on the autumn flowers. I had 9 colonies from 6 colonies, spring count. One colony swarmed on June 30, and then again on July 3; they returned to the hive, and came out again on July 5; then another swarm came off on July 6, and this swarm also went back, and then came off on July 8, to stop; and then another small swarm later on. Is it not very unusual for one colony to cast four swarms in so short a time? I have about 30 pounds of surplus honey, which is very small compared with last year's work. Other bee-keepers in this district report a poor year.

Chas. W. Dickson.

Stellarton, Nova Scotia, Aug. 25, 1890.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

HONEY AND BEESWAX MARKET.

CHICAGO, Aug. 28.—Comb honey is held very firmly this week, and the prices for white in pound sections range from 16@17c, and some fancy at 18c, but the bulk of the sales are at 17c. Demand is quite good, and more could be sold than is coming. Extracted, 6@8c; there are free offerings of California at 6@7c. R. A. BURNETT, 161 S. Water St.

NEW YORK, Aug. 25.—New comb honey is now arriving, and finds ready sale. We quote: Fancy white 1-lbs. in paper boxes, 16@18c; the same glassed or unglassed, 15@17c; the same, 2-lbs., 14@15c; off-grades, 1-lbs., 13@14c; 2-lbs., 11@12c. Extracted, basswood, 7½@8c; California, 6½@7c; Southern, 65@70c per gallon.

HILDRETH BROS. & SEGELKEN,
28–30 West Broadway.

MILWAUKEE, Aug. 23.—This market now offers good encouragement for honey. The old stock of white comb is all gone, and new, choice, 1-lbs. will meet a sweet reception. We quote 1-lb. choice white, 15@16c; good white 1-lbs., 14@15c; fair white 1-lbs., 13@14c; choice 2-lbs., 13@14c. Extracted in barrels, choice white, 7@8c; in kegs and tin, 8@8½c. Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water St.

KANSAS CITY, Aug. 22.—Receipts of comb honey are light, and demand good, at 14@15c for white 1-lbs. No 2-lbs. or dark comb in the market. Very little demand for extracted at present; white, 6½@7c; dark, 5@6c. No beeswax in market.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Aug. 21.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, August 6.—Demand is good for the new crop, and receipts are very light. White 1-lbs., 15c.; 2-lbs., 13@14c. Dark 1-lbs. 12@13c.: 2-lbs., 12c. Extracted, white, 7c.: dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Aug. 12.—Very little new comb honey in the market, and it is selling at 14@15c. Extracted, 7@8c. Beeswax, 26@27c.

M. H. HUNT, Bell Branch, Mich.

DENVER, Aug. 7.—Old honey all gone. New crop is arriving freely. Prospect good for a fall crop. We quote: 1-lbs., 14@16c. Extracted, 6@8c. Beeswax, 20@25c.

J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Aug. 15.—New honey is coming in and we are selling at 18c. Extracted, 7@8c. Beeswax, 30c. for fancy yellow.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, Aug. 20.—Good demand for comb and extracted honey. Arrivals are insufficient for the demand. We quote best white comb at 14@16c. Extracted at 5@8c. Beeswax is in fair demand at 24@26c on arrival for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

Trial Subscribers.—In order to get as many as possible to read the American Bee Journal, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
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☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
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Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
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The Lever (Temperance)	2 00	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, in Springfield, Ills., at 10 o'clock, a.m., on Sept. 26, 1890. Come, and let us have a good time.
C. E. YOCOM, Sec.

☞ The Susquehana County Bee-Keepers' Association, will meet at Springville, Pa., on Saturday, Sept. 13 1890, at 10 a.m. All are invited to attend. I would request every one in the county, who has one or more colonies, to send me their report for the season—number of colonies in the spring, number of increase, pounds of comb honey, of extracted—and of beeswax.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Nebraska State Bee-Keepers' Association will meet in convention in the Bee and Honey Hall, State Fair Grounds, at Lincoln, Nebr., on Wednesday evening, September 10, 1890. Mr. E. Whitcomb, Superintendent of the Bee and Honey Department of the State Fair, will be on hand the entire week of the Fair. He especially desires that every bee-keeper shall make this department his head-quarters. Any honey, or appliances in its production, sent in his care, charges paid, will be properly placed on exhibition. J. N. HEATER, Sec.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

Send us the Names and addresses of any of your friends upon whom you desire to call, to get their subscriptions, and we will immediately send them each a sample copy. In this way you can readily get them for a club.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, post-paid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

We club the ILLUSTRATED HOME JOURNAL (price 50 cts.) with the AMERICAN BEE JOURNAL for one year for only $1.35. You cannot afford to do without either—the one as an aid to practical bee-keeping, and the other as an invaluable literary and home periodical for the whole family.

Advertisements.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

Prices Reduced.

SELECT TESTED QUEENS, $1.25. Warranted Queens, 75 cents—6 for $4.00. Make Money Orders payable at Nicholasville, Ky.
14Etf J. T. WILSON, Little Hickman, Ky.

HONEY BOXES

A FOLDING PAPER BOX

—FOR—

PROTECTING SECTIONS OF HONEY.

For Shippers and Retailers.

All boxes printed with your Business Card on front if desired.

Samples and Prices on application.

MUNSON & CO.,
30A13t New Haven, Conn.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to

CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers.

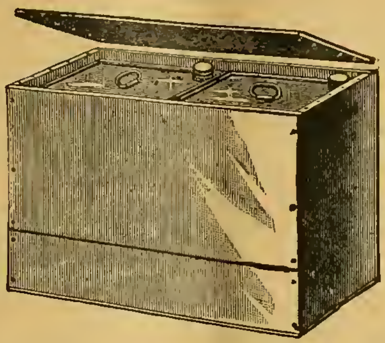
LOOK HERE!

TESTED Italian Queens, $1.00 each; Untested, 75c.; 12-pound Shipping Cases in flat, per 100, $6.00; 2x9 glass for same, per 100, 70c.; per 500, $3.00. Price-List free.

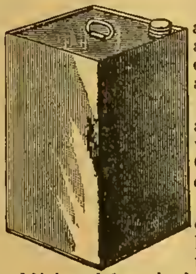
Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

Established 1850.
BAKER & CO
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

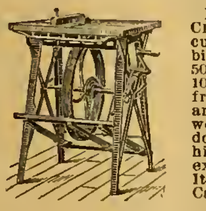
We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can	(boxed)	$ .45
12 " Cans ...	"	5.00
100 " " ...	"	40.00
1 box of two Cans	....	.75
12 boxes "	....	8.40
100 " "	....	65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

Address, W. F. & JOHN BARNES,
45Ctf No. 196 Ruby St., Rockford, Ill.

Mention the American Bee Journal.

The Lever.

THE NATIONAL - - - - - -
- - TEMPERANCE NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Send for Sample Copy.

To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

FOR SALE!

An Established Supply Business.

HAS been running since 1869. Present owner is compelled to give it up. Stock so reduced that **$500** will buy what is necessary to the trade. Capital required, from one to ten thousand. Will invoice with reasonable discount, and no charge for the business. The shop and buildings, together with 20 acres of land, can be leased for a term of years. If not sold before Sept. 16, will auction off at that date. Location convenient to both depots.

Terms Cash, or satisfactory security, on time. Have a T-Tin Machine—capacity, 500 complete Tins in an hour; a Given Press, horse power, Saws, Sheeting outfit, etc., etc., and 50 colonies of Italian Bees. Will quote prices or receive bids on whole or part, by mail.

G. M. TERRELL, Jerseyville, Illinois.
(Successor to E. S. Armstrong.)
35A2t

Mention the American Bee Journal.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,

34Atf **J. A. KING, Mankato, Minn.**

PATENTS!

PATENTS, Caveats, and Trade-Marks procured, Rejected Applications Revived and Prosecuted. All business before the U. S. Patent Office promptly attended to for moderate fees, and no charge made unless Patent is secured. Send for "**INVENTOR'S GUIDE.**"

FRANKLIN H. HOUGH,
31Ctf WASHINGTON, D. C.

THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

"Marketing," Will be the Special topic of the August number.

The "Review" is Published monthly, at 50 cts a year. Send for samples (free) and see if you can afford to be without it.

Address Bee-Keepers' Review,
W Z HUTCHINSON, Ed & Prop Flint, Mich.

23Ctf *Mention the American Bee Journal*

BEESWAX WANTED.

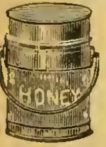
Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

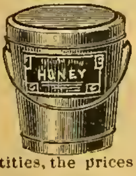
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon,..holds 10 lbs....	$1.80....	$12 00
½-Gallon, holds 5 lbs....	1.50....	9.00
Quart, holds 3 lbs	1.20....	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25....	$ 1.50....	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England

---

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

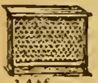
J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.



Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook, Montgomery Co., N. Y.
1Atf

Italian Queens by Return Mail

Tested, $1.00 each.
Untested, 60 cts. each, or four for $2.00.

34Atf **GOOD BROS.,** NAPPANEE, IND.
Mention the American Bee Journal.

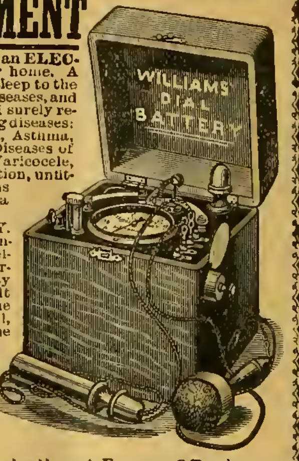
Choicest Italian QUEENS!

Purely BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early**.

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf
Mention the American Bee Journal.

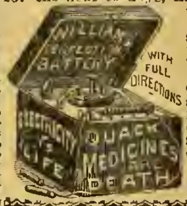
ELECTRICITY, HOME TREATMENT



ALL PHYSICIANS AGREE that every family should have an **ELECTRIC BATTERY** in their home. A mild Electrical current will ease the whole body, giving that sweet sleep to the well and tired, as to the invalid suffering from blood and chronic diseases, and who find **night their worst time to rest. ELECTRICITY** will surely relieve and in thousands of cases permanently cure any of the following diseases: Paralysis, Sciatica, Nervousness, Neuralgia, Catarrh, Loss of Voice, Asthma, Malaria, Dyspepsia, Liver Complaint, Constipation, Rheumatism, Diseases of the Kidneys, Female Complaints, Seminal Weakness, Impotence, Varicocele, Hydrocele, Exhausted Vitality, resulting from ignorance, Overtaxation, unfitting the victim for work, business, or the social and other relations of mankind. The Battery is always ready, and can be used at a moment's notice.

By all means use the WILLIAMS' DIAL or PERFECTION BATTERY.

The **Dial Battery** is enclosed in a beautifully polished mahogany finished box, 9in. high, 8 deep and 8 wide. All the interior parts are nickel-plated and finished in the very best style. It gives five different currents. The strength is regulated by the Dial; this shows the quantity of electricity you take. The Battery cannot get out of order, and it is impossible to cause injury in any way. The regular price of the Dial Battery is Twelve Dollars (**$12.00**), but to introduce it, we will, for the next 90 days, fill orders for this splendid machine at the **wholesale price, $9.60.**



OUR PERFECTION BATTERY, standing 6 inches high, 5 1 2 deep by 5 1 2 wide, is a marvel in beauty and finish, and thoroughly reliable. It gives five different currents. Price, Five Dollars (**$5.00**). Our Batteries are securely boxed and shipped to any part of the country, on receipt of price. We send C. O. D. on receipt of One Dollar, **subject to full examination at Express Office by your family physician,** if you so desire. Send money by registered letter, post office order, or bank draft.

UNITED STATES BATTERY AGENCY,
177 & 179 Montague Street, Brooklyn, N. Y.

☞ CIRCULARS, GIVING FULL INSTRUCTIONS, SENT ON APPLICATION.

23Ctf WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

I HAVE COME

To say to the readers of the BEE JOURNAL that you can get **Italian Bees and Queens** from the

KNICKERBOCKER BEE-FARM,

By **Return Mail or Express,** at the following prices:

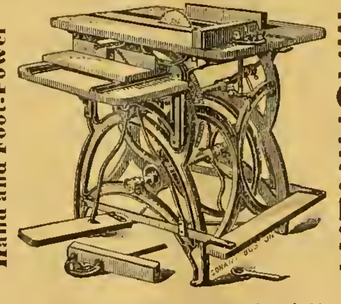
	Each.	Per ½ doz.	Per doz.
Virgin Queens	$ .40.........	$2.00........	$ 3.50
Untested Queens...........	1.00....	..... 5.00........	9.00
Tested Queens	1.50..........	7.00........	13.00

One-pound of Bees, $1.00; 5 lbs. or more, 75c per pound. Two-frame Nucleus, $2.00. **Special Rates** on large orders. Circular and Calendar free. Address.

G. H. KNICKERBOCKER, Pine Plains, N. Y.

30Etf WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

MARSTON'S Hand and Foot-Power MACHINERY



CIRCULAR Saw, Iron Frame, Steel Shafts, and Arbor's Machine-Cut Gears. Iron Center-part in top. Send for Circular and Price-List. **J. M. MARSTON & CO.,**
21C13t 75 Lenox Street, BOSTON, MASS.
Mention the American Bee Journal.

A.I. ROOT
MEDINA, O.
BEE SUPPLIES
CATALOGUE FREE.
PUBLISHER OF GLEANINGS IN BEE CULTURE
SAMPLE COPY FREE.

Mention the American Bee Journal.

☞ Leipziger Bienen-Zeitung. ☜

Organ für alle Imker deutſcher Zunge.

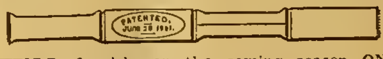
Billigſte und reichhaltigſte illuſtrierte bienenwirtſchaftliche Monatsſchrift. Mitarbeiterſchaft der hervorragendſten Imker. Beliebteſte und verbreitetſte Bienenzeitung in ganz Deutſchland und Öſterreich. Preis pro Jahr nur ½ **Dollar.** Beſtellungen ſind an unſeren Vertreter, Herrn Miſſionsprediger **Stephen Roese in Maiden Rock** (Wisconsin) zu richten. Probehefte umſonſt und frei von demſelben.

34Ctf
Mention the American Bee Journal.

. J. FORNCROOK & CO.,

MANUFACTURERS OF THE

"BOSS" ONE-PIECE SECTIONS,



WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best.

☞ Write for prices.

Watertown, Wis., Jan. 1, 1890. 1C1y

Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Sept. 13, 1890. No. 37.

EDITORIAL BUZZINGS.

The Editor, after awarding the Premiums at the Detroit Fair and Exposition, returned home by way of the Lakes, for the purpose of resting, for six days, his tired brain, and adding strength to his system. For since his severe attack of *La Grippe*, and its legacies of disease, his usual strength has not fully returned. He arrived at home just as this issue of the BEE JOURNAL was all in type with the exception of a few inches of space on the editorial page. In the next issue he will more fully describe the Honey Exhibit at Detroit, and make some comments upon the manner of arranging exhibits to be "the most attractive," and, at the same time, the most beneficial to the general public by advertising honey, and making known its many uses and possibilities in nature and art.

◆

The Michigan State Convention is to be held in Detroit, Mich., on Jan. 1, 1891, and it is very much desired that it shall be a grand meeting. To that end Prof. Cook, the President of the Association, calls attention to the coming session of Michigan bee-keepers in the following, to which we invite special notice :

> I wish to call attention early to the next meeting of our Michigan State Bee-Keepers' Association, which is to be held in the city of Detroit, on Thursday, Jan. 1, 1891. It will be remembered what a grand meeting the National Bee-Keepers' Society had in Detroit. We hope that this will be "a close second" in interest and profit. It is held on New Year's day, so all may get one-half rates on the railroads. It is hoped and expected that there will be a large attendance from Ontario, Ohio, New York, Indiana, and other States. Let all plan in advance to be there, prepared to take a part.
> A. J. COOK, *Pres.*

Gleanings in Bee-Culture for Sept. 1 came out in a neat *new* dress of type, and looks very attractive and readable. We are glad to note this fresh evidence of increasing prosperity.

Bro. Root has our thanks also for his very kind notice of our late visit at his establishment. We enjoyed the time there spent very much, and hope to see it again before another 15 years shall have elapsed—for that was the time intervening since we last called on Bro. Root, at Medina, O.

How things have changed since then ! At that time he was keeping a small jewelry store, and had but just commenced to make bee-supplies. Then a small store provided the room, and a little wind-mill supplied the necessary "power" to run a small saw, etc.—now it requires a 150 horse-power engine to run the establishment, which consists of four large two-story buildings, with another in course of erection, 37x100 feet.

Medina is to have another railroad—a close connection for Chicago and the West. This is being built through the "Root" farm, and will cross the other railroad just at the Factory.

We most fully endorse the sentiments expressed by Bro. Root about the "pleasant and brotherly relations" between us. Editors, like others, should be able to enjoy a visit at rival establishments, or at least be friendly enough to work together for the general good of the pursuit in which they are engaged. We never had a more pleasant time, and we most fully endorse the sentiment expressed by Bro. Root, that "long after the present editors have been gathered to their Eternal Home," the harmonious relations may exist between the two periodicals, and mutual "reverence and respect" be felt by those who may succeed us.

◆

Struggle for Supremacy with the breeders of live stock, and manufacturers of agricultural machinery, and contests for prizes in all that pertains to agricultural pursuits, will be the event of the season. The Indiana State Fair has a National reputation, and is noted for its leading features, which will be amply sustained in the forthcoming exhibition, commencing Sept. 22, as set forth in the premium list, furnished on application to the Secretary at Indianapolis.

Several thousand dollars in increased premiums and improvements, including a new Floral Hall, and four new horse-barns, improved water facilities and rapid transportation, give indication of the efforts of the management to insure success.

◆

Prof. A. J. Cook, of Agricultural College, Mich., has sent us a copy of the programme at the meeting of the "American Association for the Advancement of Science," held at Indianapolis, Ind., on Aug. 26, 1890. We are glad to note therein that our genial friend, the Professor, was elected Secretary of the "Biological Section" of the Association. The next meeting will be held in Washington, D. C., in August, 1891.

◆

Bro. W. Z. Hutchinson, editor of the *Bee-Keepers' Review*, will award the Premiums in the Bee and Honey Department at the Fair at Port Huron, Mich., on Sept. 17, 1890. The display will no doubt be good, the Premiums will be awarded strictly according to merit by an efficient judge, and on Thursday the bee-keepers should be present to have a nice visit and re-union.

◆

☞ Dr. J. P. H. Brown, of Augusta, Ga., we learn with regret, has been laid up with sciatica for some months, but is "himself again" now. In a letter just received he remarks thus :

> I must congratulate you on the "make up," and on the solid, substantial matter in the ILLUSTRATED HOME JOURNAL. You need not be ashamed of it, for it is just the thing for the the family fireside—a spur to intellect, a guide to good morals, and a teacher of refinement.

◆

Mr. Ernest R. Root, as reported on page 595 of the BEE JOURNAL, has returned from visiting New York and Vermont bee-keepers, and inspecting their apiaries, the results of which he is graphically portraying in pleasant "notes on the way" in *Gleanings in Bee-Culture*. We take pleasure in giving a few of the "notes" on page 616, describing visits to our genial friend and voluminous correspondent, Mr. G. M. Doolittle, and also to Messrs. P. H. Elwood and J. R. Tunicliff, near the same region. Such a trip on the "wheel" cannot fail to be enjoyed by the visited as well as by the visitor, and will serve to unite in closer bonds of friendship all lovers of the "little busy bee.."

◆

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for a year with the above for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications.

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Rollie Ryan, the "beloved boy of the household" of Mr. R. R. Ryan, of Bradshaw, Nebr., died after a sickness of but six days with congestion of the bowels. Mr. Ryan is one of our correspondents, and a prominent apiarist in his State. We extend to the bereaved family the sincerest sympathy of the BEE JOURNAL and its readers in this time of their sad affliction.

Much of the Injury done to fruit is charged up to the bees by those who do not take the trouble to think or reason the matter to a natural conclusion. But over-ripe fruit will crack open, bees or no bees, and then it is useless for the market. All that can be charged against the bees, is the fact that when the skin of the fruit has been punctured by birds, wasps, etc., or has cracked open, then the bees will carry off the juices to their own detriment.

Almost every one has noticed that juicy fruits, such as plums, peaches, grapes, tomatoes, etc., will be cracked by a rain.

In the New Orleans, La., *Times-Democrat*, a correspondent who signs himself as "H. J.," gives the following as his opinion concerning the cause of the cracking of fruit :

This cracking has been explained in various ways, but we think it is properly attributed by Bossingault to *osmose.*

If a bladder filled with syrup be immersed in a vessel of water, the water will, after awhile become sweet ; the syrup passes through the membrane of the bladder into the water, and correspondingly the water passes into the interior of the bladder.

But this interchange is not an equal one ; the lighter liquid—the water—passes in many times more rapidly than the heavier liquid, the syrup, passes out. The consequence will be that the bladder will be distended to its utmost, and at length burst. A ripe tomato or plum may be considered in the condition of the bladder of syrup. The rich juices of the fruit correspond to the syrup, and the thin membrane which forms the skin of the fruit represents the bladder.

When the ripe fruit is kept constantly wet by a rain, *osmose* takes place, and the water passing through into the fruit distends the skin, which, not being very strong, is soon ruptured. If the fruit were to be surrounded by a liquid denser than its juices, it would, instead of expanding and breaking, shrink, and the skin become shriveled,

When strawberries or blackberries are sprinkled with sugar, a syrup is soon formed by some of the juice of the fruit, and this being considerably denser than the juices of the berries, they are soon very flabby and shriveled.

The Raspberry, among all the trees and shrubs which are cultivated generally throughout the United States by fruit-growers, is commonly conceded to possess more value to bee-keepers than any other, says Prof. N. W. McLain, of the Minnesota Experiment Station. A quarter of a mile from this Station a market-gardener has four acres of raspberries. These bushes continued to bloom for ten days, and during that time, with the exception of two or three rainy days, a continuous procession of bees could be observed going and returning to and from the apiary, and a fine showing of honey was made in the hives, and the honey was of superior quality.

Weak Colonies should be doubled up until they are strong, when preparing the bees for winter. Do not endeavor to winter small colonies, as it almost invariably results in loss.

Preparing Bees for Winter.—In his annual report of the Colorado Experiment Station, Prof. C. Max Brose writes as follows :

The successful wintering of bees is of the greatest importance to the bee-keeper. On it, depends his success or failure for the following summer ; and, in order that every colony may be strong in the spring, eager to start the summer campaign of gathering stores for themselves and their owner, the following points are of greatest importance to the apiarist :

The colonies should go into winter quarters with plenty of young bees—at least four frames should be well covered with them—and 35 pounds of sealed honey. They should be kept at an even temperature—45 to 50 degrees—and never be unnecessarily disturbed. The hive should be in such a condition as to absorb all the moisture generated by the bees during the winter.

Before cold weather sets in, all the colonies should be examined, and if either stores or bees are lacking, they should be supplied during warm weather. In this region, we advise examining all the hives by the first of September. One of the greatest errors that the novice in bee-culture will make, is in the wintering of weak colonies. These should be united until they are strong enough to well cover at least four Langstroth frames.

The space in the hives should be closed to at least four frames by chaff division-boards, and enlarged as the colony gains in strength, and needs more room. Every night they should be fed about one-half pint of syrup made from granulated sugar. The bees will go to work as eagerly as if it were in the month of June. The queen will lay, and by the time your four or five frames are full of brood and sugar syrup, and the space closed down to the size of the colony by chaff division-boards, a chaff cushion over them, they are safer to winter.

Bees in a warm climate need no protection during the winter, but where the winters are severe, they must be protected from cold and damp weather.

The chaff hive solves the problem of successful wintering.

1. It keeps the air dry, and at as even a temperature as possible, below and above the inside body of the hive being packed with chaff. It absorbs all the moisture generated by the bees during cold weather, and, being also a non-conductor, it responds slowly to the sudden changes of the weather.
2. Bees are kept undisturbed and quiet, allowing them a chance to take a flight, so necessary during a warm spell, without the undue excitement caused by the carrying from and to the cellar.
3. Being warm at all times in a chaff hive, it will give the bees a run to all parts of the interior, even during winter weather.
4. It is the most natural way for bees to winter.

☞ The Texas *Siftings* compliments the bee on its good sense and business ability, and says :

"How doth the busy little bee
Improve each shining hour ?
It gets a hustle on itself
And works the early flower."

The bee also teaches the foolishness of working and laying by more than is needed for some one else to come along and make merry over, as the man who so kindly provides them with a nice little hive takes the lion's share of the honey. Alas ! in this world it is often the case that the man who lives in the nice house is working for the benefit of the mortgagee.—*Exchange.*

The Color of the Honey produced very often has much to do with its prompt sale upon the market, whether it be honey in the comb or extracted. In regard to this subject, Annie C. Webster writes thus in the *American Cultivator :*

As a rule a dry season is less favorable to bee-keepers than a wet one ; but, on the other hand, too wet a season is not desirable. In very wet seasons the plants produce honey so rapidly that it is coarse in flavor, and the honey, when prepared for market, is not as fine in flavor and taste. The plants are unduly forced in their growth by the stimulating powers of the moisture, and their products are not as fine and as well matured as those of slower growth. The bees sometimes change the color and quality of the honey, if they are in good condition physically, but, as a rule, the honey that is placed on the table is not much altered from that taken directly from the plants.

There seems to be a general prejudice against dark honey, and it never sells until all of the white honey is disposed of. The clear amber probably sells better than either one. Dark honey gathered from buckwheat is inferior in quality, but dark chestnut honey is of superior flavor. But appearances go a long way towards selling an article, and bee-keepers should remember that good dark honey will not bring its fair price. In planting for bees, it is just as well, then, to plant only such crops that produce the light or amber colored honey of commerce

Buckwheat may also be sown, but too much of this gives a decidedly dark color to the honey, and an inferior quality. One should have the ambition to make the honey product of the farm as well known for its quality as the fruits, for in this way a better price can in time be obtained for it.

There are so many compounds called "honey" in the market, that the genuine article becomes swamped, and no fancy price will be paid for it unless the purchaser is assured that it comes from a certain apiary, noted for its fine honey-production. A name of sending nothing but the best of honey to market, is worth something to the apiarist.

Bees Die from Stinging.—That bees are not killed by the act of stinging, is maintained by a prominent apicultural student and writer, who says that a bee which stung him and lost its sting lived for weeks—or for a "week or two." Prof. A. J. Cook, in the N. Y. *Tribune*, says that on the contrary his students have tried this experiment repeatedly, and have invariably come to just the opposite conclusion. In their tests they "take several bees that have sacrificed their stings by use, and place them in a cage with feed. In another cage, precisely similar, sound bees are placed. Invariably the lacerated bees die first, and usually very soon. We have but to remember that the barbs on the lancets of the sting take fast hold and pull the sting from the bee that is brave enough to use it. Now the injury from stinging may be greater or less, depending upon firmness of the hold, and we understand how the wounded bee may live for some days ; but when we compare them with healthy bees, then we see a striking difference."

Alfalfa as a Honey-Plant is considered very fine in western portions of the United States, where it is cultivated extensively as a fodder for farm stock in general, and for honey in particular. Its history, characterics, and directions for planting are given in the following from one of our agricultural exchanges :

> Alfalfa has been in cultivation since very ancient times, being introduced from western Asia into Greece about 500 years B. C. It is of general cultivation in both hemispheres. On the pampas of Buenos Ayres it has escaped from cultivation, and grows extensively in a wild state ; likewise in parts of Mexico. Though known for a long time in this country, it is not cultivated to the extent that it should be.
>
> Alfalfa is a perennial, and especially adapted to dry climates, withstanding drouth better than other clovers. Tenacious lands that hold water are not suitable for its culture unless well drained. A permeable sub-soil is best, as it allows the roots to penetrate to a great depth—8 to 20 feet.
>
> Before seeding, have the ground in a thoroughly pulverized condition, and sow early in the spring, so that there will be time for the plants to become well established before they are subjected either to drouth or extreme cold. If seed is sown broadcast, 20 pounds per acre will be required ; if in drills, 15 pounds will be enough. If raising seed is the main object, then 12 or 14 pounds to the acre will give the best results, as the plants will be more vigorous, and yield more seed. Drill culture gives the best results, especially if the soil be dry or weedy. The drills may be 12 to 18 inches apart, according to the tool used in cultivating. Seed if sown broadcast gives the best results if put in alone.
>
> Alfalfa should be neither mowed nor pastured until it has made considerable growth and got well established. As a soiling plant it has no superior, being sometimes mowable 5 to 7 times in one season, and yielding a large amount at each cutting of nutritious hay, which is relished by all kinds of stock. For hay, cut as soon as the blossom appears, and cure so as to prevent loss of leaves in drying. The seed is saved from the second crop, and amounts to 10 to 14 bushels per acre. The yield per acre of hay is from 4 to 6 tons.

The splendid qualities of the honey gathered from alfalfa are thus commented upon by Mr. A. I. Root, editor of *Gleanings*, when giving his opinion of a sample received from a bee-keeper residing in Broomfield, Colo. :

> The sample of alfalfa honey is not only the finest in appearance of any honey I ever saw in my life, but it is also equal in flavor. It is almost if not quite as clear as water, and yet during a hot July day it will scarcely run. It is as clear as a crystal, and exquisite in flavor. Very likely our friend has not a ton of such honey ; but if he has, I should think it would be a small fortnne if he could get it before the class of people who buy gilt-edge butter, and things of that sort. And, by the way, we are using alfalfa honey on our table day after day. I never ate any other honey that suited so well, and for so great a length of time. At present the outlook seems to be that alfalfa honey is destined to lead the world.

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Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

MY OWN BEES.

BY STELLA A. ALLEN.

Down in the red and white clover,
  Under the sassafras tree,
Stands a colony of Italians,
  That my father has given to me.
They have a fairy-like palace,
  Beneath those shady bowers,
And fruit of many day's labor,
  The balm of a thousand flowers.

Within that royal domain,
  That is seldom brought to view,
Is a form that walks amid her train
  With her bands of golden hue.
Right royal are her subjects,
  As willing to do or dare,
To protect themselves from danger,
  And their queen of beauty rare.

And on their rustic seat I sit,
  And watch their eager haste,
As they carry in sweet stores of food—
  Not a moment runs to waste.
And a useful lesson, too, I learn,
  As they gather in their store.
I, too, may lay up treasures,
  Of wealth and wisdom's lore.

QUERIES and REPLIES.

Paper-Cuttings vs. Sawdust for Winter Packing.

Written for the American Bee Journal

QUERY 728.—1. Would there be any objection to using paper-cuttings, such as we find in book binderies or printing offices, for winter packing ? 2. Would it be as desirable as sawdust ?—A. R.

1. No. 2. Yes, if not better.—DADANT & SON.

1. No. 2. I think so if well packed.—A. J. COOK.

1. I think uot. 2. I would prefer sawdust.—M. MAHIN.

I do not know. I would try a few hives first.—EUGENE SECOR.

1. Dry hard-maple leaves will beat it. 2. I think not.—J. M. HAMBAUGH.

It will make good winter packing, I should say.—JAMES HEDDON.

1. No. 2. I would prefer the cuttings to sawdust.—J. P. H. BROWN.

I doubt if you can tell any way but by trying.—C. C. MILLER.

1. I have had no experience with that material.—R. L. TAYLOR.

1. No, I think not, but I consider oat-straw chaff the best and cheapest.—MRS. L. HARRISON.

1. I think the paper-cuttings would be safe, but I should perfer the sawdust.—C. H. DIBBERN.

I have had no experience in winter packing, but should think that dry sawdust would be most desirable.—A. B. MASON.

1. It would mold. 2. Sawdust would be much better. I have better success with dry maple leaves.—H. D. CUTTING.

1. I should think that it might do well. I never used any, so I could not tell how it would compare with sawdust.—G. M. DOOLITTLE.

1. I would not use the paper, if chaff or straw could be procured. 2. I should prefer the sawdust to the clippings. Bran is good.—J. M. SHUCK.

1. I have never tried it, but I am not favorably impressed with its fitness for the purpose of an absorbent. 1. I think not.—G. W. DEMAREE.

1. I think not 2. Yes, I believe it would be very much better, for I think sawdust the most undesirable packing for winter I ever used.—G. L. TINKER.

1. None at all. 2. I think that it would be more so, if finely cut and perfectly dry. It certainly would not be so apt to collect and retain moisture, as would sawdust. For myself, I prefer an air-space instead of filling.—J. E. POND.

BEE CONVENTIONS.

The Southwestern Wisconsin Bee-Keepers' Association, which meets at the residence of E. France, in Platteville, Wis., on Oct. 8, 1890, promises to be a very profitable gathering of the apiarists of that progressive State. All are invited to attend. The following subjects are announced, and will be carefully prepared and presented, after which interesting discussions thereon will ensue :

Implements in the Apiary, by F. L. Snyder, of Orion.
Artificial Swarming, by E. France, of Platteville.
Natural Swarming, by G. O. Miller, of Boscobel.
Comb Foundatioa, by Benj. E. Rice, of Boscobel.
Best Way for Hives to Face, by B. Bartholomew, of Boscobel.
Races of Bees, by N. E. France, of Platteville.
Wintering Bees In Doors or Out, by Chas. Zelmer, of Wauzeka.
Feeding Bees, by M. M. Rice, of Boscobel.
Locating an Apiary, by Court Main, of Boscobel.
Size of Hives, by W. H. Prideaux, of Bloomington.
Queen-Rearing, Introducing, etc., by A. Arms, Hurlbut's Corners.
Marketing Comb and Extracted Honey, by H. Evins, of Wauzeka.
Help by Our Society, National, State and Local, by N. E. France, of Platteville.
Honey-Plants—Wild or Cultivated, by J. W. Van Allen, of Haney.
How Best to Extract, by Edwin Pike, of Boscobel.
Robbing—Cause and Cure, by A. E. Collie, Mt. Hope.

EDWIN PIKE, *Pres.*
B. E. RICE, *Sec'y.*

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, in Springfield, Ills., at 10 o'clock, a.m., on Sept. 26, 1890. Come, and let us have a good time.
C. E. YOCOM, Sec.

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Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

CORRESPONDENCE.

QUEENS.

A Safe Method of Introducing Queen-Bees.

Written for the American Bee Journal
BY DR. G. L. TINKER.

The traffic in queen-bees would undoubtedly be greater than it is, if bee-keepers had a perfectly safe method of introducing. At the present time we have in this country many expert queen-breeders who have for years spared no end of pains and trouble to improve their bees. The stock is the very best of the strains of bees they advertise, and its introduction into other apiaries is certain to be followed by good results from new crosses, and the infusion of new blood.

The great drawback with many bee-keepers from investing in the much-coveted stock is the fear that they may lose the queens in introducing. Many have already ventured and lost fine queens, and if they decide to try it again, it is with a feeling of great uncertainty that they may lose others, if purchased.

Now is the best time of the season—August and September—to introduce queens, according to my experience, but more care is required than during a honey-flow. Still, I can see no reason why any one cannot introduce queens now with perfect safety, to strong colonies. My method is this:

If I send away for a queen, I make no preparation to introduce her until she arrives. Then I select a strong colony, and remove the queen and close the hive. In from two to three hours afterwards, the bees will miss their queen and begin to look for her. They become greatly agitated, and are often in a condition to receive any strange queen that might be given direct. Now this is the proper time to give the new queen, but if we are to make a *sure* thing of it, she must be caged.

The cage in which the queen is received by mail is just as good as any—simply let out the worker-bees with her, and put back the wire-cloth. If the candy in the cage is exposed, tack a piece of wood over it, and arrange so that the bees of the hive cannot get at the queen except through the wire-cloth. Then lay the cage, wire-cloth side down, bee-space from the tops of the brood-frames. This may require a shallow rim and cover to fit, or if the hive is a two-story one, the rim is put between the two stories, and the caged queen on the lower set of frames.

The hive is then closed, and left for *five* days, at which time the bee-keeper will open the hive, take out the caged queen, and smoke the bees. Remove each of the brood-combs and shake off the bees so that every queen-cell can be seen and destroyed. There will seldom be found more than two or three cells, and often none. The cells are, moreover, easy to find, but where a queen is removed from a colony, and none were given back in her place, the bees will build a great number of cells, and some of them may be hard to find—if the bee-keeper waits for nine days, as has been recommended, in order to make the colony absolutely queenless by cutting out all cells before trying to introduce the new queen. It is therefore far better to give the new queen at once, as above advised, after removing the old one.

There is no danger to the caged queen if there is not a particle of food in the cage. The bees will care for her. I have left them thus for two and three weeks—in fact, until the colony had laying workers, when they would no longer accept the queen.

The cells being all removed, the combs are re-arranged in place, and the queen allowed to pass down between the combs, the point at which she went down being noted. Then close the hive, and wait 20 minutes, and re-open it. Remove a comb at the point where the queen disappeared. If she is found running about all right, she is safely introduced. Should she be not found on either of the two combs at the point she entered, or on the bottom of the hive "balled," she is safe, for if the bees decide to "ball" her, she is never allowed to get far from the place she entered, and she will there be found, or at the bottom of the hive "balled;" in which case, the ball of bees is to be lifted out on the ground—no need to be in a hurry, as the bees will not sting the queen, nor let her get away.

Have a smoker at hand ready to light, smoke the ball of bees, and re-cage the queen and leave her on the frames for another two days, when the hive is to be re-opened and the same plan gone over again.

I have had to re-cage some queens three or four times, but the bees will finally accept them. Where I have had this trouble it was from taking all of the brood away, and then trying to introduce. It is not a good way. The bees must first be allowed to build cells, if they will; but they often do not, showing the unanimous acceptance of the queen from the first. After building cells, bees are satisfied to take any queen given as above advised, and I have never yet had one "balled" where so introduced. But if there is any deviation from the above plan, it will not always work as stated, and re-caging of the queen will be required.

I do not know why some queens are harder to introduce than others, but all go in about the same when the above plan is followed. In my new book I recommended to let the bees liberate the queen by eating out a plug of candy, and this plan seems best for the novice; but for myself I want to *see* that the queen is all right, and trust to no chance about it whatever.

New Philadelphia, Ohio.

BEES—POULTRY.

An Enthusiastic Texas Woman's Experience and Advice.

Written for the Texas Farm and Ranch
BY MRS. SALLIE E. SHERMAN.

Bees and poultry—what a theme for the women of our vast State with its vast resources. The possibilities are far beyond my ken. It is thought by some that these are too insignificant to have more than a passing thought; but I beg leave to differ from all who think so. I tell you that if these two industries alone properly combined were to receive thoughtful consideration, there would be more attention paid to these little side-issues, our people would live better, and would be more healthy and happy than at present.

If our women would take hold of these vocations and get out of the house into the pure air and genial sunshine, we would have fewer dyspeptics and more healthy women, who would enjoy life much better than they do at present. Suppose you do get sunburnt, and a few stings occasionally, what of that? Do you find roses without thorns? Could we expect to get delicious honey without getting stung occasionally? Or eat the nice broilers and excellent eggs without looking after the wants of our fowls? Then my advice is for the sickly "house-plants" to engage in something that will call them outside, into the bright sunshine.

I know of nothing better calculated to interest and instruct us, and at the same time to remunerate us for the labor bestowed, than bee-keeping and poultry-raising combined. In doing this, I think it is better to keep only one kind of chickens, but as many other kinds of fowls as you like or can care for. The utmost cleanliness is necessary in order to keep your fowls healthy and in good condition. It takes but a few minutes to sweep and clean out their house daily, when, if put off longer, it is more difficult, and at the same time endangers the health of your fowls.

I never saw a case of chicken cholera until I moved to Salado. I lost nearly all I had for three years in succession. I inquired what the cholera was, and invariably received the same answer—"bowel-troubles." I determined to find out for myself, so I began *post mortem* examinations. I found in every instance that it was the gall that was most affected. When the chickens fell dead suddenly, I found that the gall had burst. When they dropped around for several days and then died, the bladder containing the gall was full of little perforations, and the fluid would gradually ooze out. About this time I heard of the parched or burnt corn remedy, and also of putting lime in their drinking water. These, with cleanliness, are my sole remedies for the much-dreaded disease.

Always in dressing a chicken I examine the gall, and if it is enlarging, and the covering beginning to get too thin, I put about a tea-spoonful of lime into say one-half gallon of drinking water for them, and feed them charred corn. In fact I parch nearly all the corn I feed my chickens, by putting it in the stove in the ear while the stove is hot immediately after cooking. This consumes but little time, does the work nicely, and is highly appreciated by the fowls. In this way I keep them healthy, and lose no more with the cholera.

You should study well before making your selection of the variety you like best. After you have made it, stick to it, and do not be always changing or mixing up mongrels, if you propose keeping pure stock. In making your selection, you should study your circumstances, surroundings, and market, and be governed accordingly.

The sting of the bee is so peculiarly constructed that if you pull it out, instead of relieving the pain, it adds greatly to it, for instead of pulling out the poison, you push it into the flesh. This is not generally known, hence the severer pain from the sting. Scrape the sting out immediately with a knife, and you scrape the poison out also, and soon forget that you have been stung.

Do not go into the business on too large a scale at first, but let your knowledge increase as your apiary grows. Get some standard work on the subject of bee-keeping, and take at least one good bee-periodical. Study them closely, and try to put every good thing you see mentioned into practical use. Do not, like a lady of my acquaintance, wait until the bees commence swarming, and then have to hunt up the bee-book to see what to do with them. Do not go into the business unless you are determined to make a success of it. Better never begin than to make a failure.

You must have energy, pluck, patience and perseverance, if you would make a success in bee-keeping and poultry-raising. Get the pure Italian bee to begin with, as I consider them as far superior to the common little blacks, as a Berkshire hog is to a "razor-back." Have an observatory hive conveniently placed, so that you can look at it at any time, and see just what is going on inside, for this is, or should be, the index to the apiary.

You cannot keep bees intelligently without becoming enthusiastic. It awakens a new field of thought never before dreamed of. It changes the despised weed that was once a nuisance and an eye-sore, into the wonderful honey-producing plant. Take for instance the hoar-hound, that is in many places considered a great nuisance; put the tiny flower under the magnifying glass, and look at its wonderful structure and marvelous beauty! From this source alone last year my bees gave me a ton of honey!

Just for a moment think how much honey goes to waste each year in our great State, for want of bees, intelligently managed, to gather it; and how many poor little children there are who never so much as get a taste of the delicious, God-given sweet! In the name of humanity, come out-doors and help me work with the bees.

I, too, used to be a dyspeptic, and did not know for years what it was to feel well. I have lived for months at a time on two scant meals a day, consisting of two glasses of sweet milk and a small hoe-cake or corn-bread with the bran in it, and that, too, when I had plenty. Now I really believe that I am considered the most robust and healthy woman of our town. Thanks to active out-door exercise, and the constant use of honey, for my good health, which I prize more highly than any other earthly blessing. Again I say, "Go thou and do likewise."

Salado, Texas.

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FALL FLOWERS.

An Excursion to the Mississippi River Bottoms.

Written for the American Bee Journal

BY W. J. CULLINAN.

For some time neighbor Hayck and myself had been planning an excursion to the valley which bounds the course of the great "Father of Waters," to see what the prospect was for fall honey, and also take a hand at fishing—or, in other words, we were going to "take a day off," and just simply enjoy ourselves.

So on the morning of Aug. 12, after a night filled with visions of big fish and boundless acres of golden bloom, we sallied forth to carry out in fact what we had been enjoying in imagination.

We started in at the foot of "Swallow Hill," and following the course of the great river we waded waist-deep to shoulder-deep through a perfect sea of fall-blooming plants, consisting of Spanish-needle, golden-rod (which is certainly entitled to the proud distinction which will soon be accorded it), wild honey-suckle, heart's-ease, boneset, and myriads of other plants of lesser note. The wild honey-suckle was in full bloom, heart's-ease, golden-rod and boneset were just coming into flower; while Spanish-needle or coreopsis (which stands firmly arrayed against the whole list for honey, at least in this section) would be blooming in about a week; and in my humble opinion, no grander sight ever greeted the eye of the bee-keeper, than this great plant when in full bloom; thousands of acres of it, thickly phalanxed, bares its golden bosom beneath an autumn sky, ladening the air with its rich aroma, and later fulfilling in such bountiful measure the earlier promise of its golden bloom.

Well, after enjoying (as only bee-keepers can) all this wealth of flowering plants, and in the meantime having meandered (almost unconsciously) some two miles down the valley, we began to cast around for a certain lake, which we were told existed thereabouts, and, what was of more importance to us, abounded with fish; soon we came upon a lake that must be the one of which we had been told, but so diminutive in size that we disdeigned to waste our precious time angling for fish in such a stream, and so moved on; soon we came upon a slough, fed from the river, and in which my friend said that there were some large-sized fish. Here we cast our hooks, richly baited with worms and frogs, but soon discovered that nibbling was the order of the day, and after spending about two hours at this delightful sport, and getting many bites (but no fish) we came to the conclusion that it was too cool and windy, or else the finny inhabitants of this stream had "caught on," and knew how to take the bait without swallowing the hook; and wiser, but no richer, we turned our steps toward home.

Mr. Hayck has concluded to move his bees to the bottoms, and place them right in the midst of all that wealth of bloom; and if his hives are not heavily laden with the precious nectar this fall, it will not be his fault.

His bees are mostly in Heddon hives; and right here I wish to score another point in favor of that excellent hive: The covers being the exact size of the body of the hive, with a cleat across each end and extending about one inch above the surface of the same, we took pieces of wire screen three inches wide, and tacked one on each side of the cover, and then reversing the latter, tacked the projecting inch of wire to the side of the hive, which gave about 1½ inches of space above the tops of the frames in which the bees could come up and cluster, with ample ventilation from the sides. The entrances were closed by tacking a piece of lath across the same.

A good rain fell here last night—the first of any consequence since June 14. It will benefit the fall bloom as well as other fall crops.

Quincy, Ills., Aug. 21, 1890.

VISITING.

Notes of Travel Among New York Bee-Keepers.

Written for Gleanings in Bee-Culture
BY ERNEST R. ROOT.

The ride by boat on the beautiful Lake Skaneateles to Borodino, to the residence of G. M. Doolittle, was fine. The water was so clear that, just before starting, I could see a large fish at a depth of 12 or 15 feet off the dock. As we steamed out into the lake, the beauty of the scenery became more and more manifest. The shores rise gradually from the water's edge, and off in the distance little towns are pointed out.

"Over in that direction," said the captain, in answer to my inquiry, "is Borodino."

Doolittle has a beautiful location, I thought. There are never any mosquitoes around this lake, I am told; and the water is so clear, and the shores so inviting, it is a wonder that the lake is not more visited by pleasure-seekers.

In about half an hour I was landed on the Borodino dock. As it was rather late I put up at the hotel. The following morning found me on the wheel sailing toward the home of Mr. Doolittle, for his place is about a mile out. I looked along the road to see if I could pick out Mr. D's home. That place doesn't look exactly like it. Finally, from the top of a hill I see a very pretty country residence. Every thing about the place shows neatness and taste, and the buildings are well painted. I wonder if *this* is not the place. As my bicycle travels noiselessly along, suddenly an apiary looms up in the rear. Yes, there is a bee-cave. This *must* be the place, and so I turn in. I lean the bicycle against an overspreading apple-tree by the side of the house.

AT THE APIARY OF MR. DOOLITTLE.

"Is Mr. Doolittle in?" I inquired of a man in the barn.

"He is in the shop, and will be out presently."

I strolled into the apiary meantime, wondering whether my friend would recognize me. After waiting a moment, somebody steps from the shop. He has a sandy beard, and he looks like a portrait I have seen somewhere.

"Good morning!" I said. "This is Mr. Doolittle, I suppose?"

"And is this Ernest?" said he, grasping my hand. "I had not expected to find you wearing glasses."

"I have been using them ever since I left school, five years ago, and ought to have begun wearing them sooner."

Together we went into the shop. I noticed he was very careful to close the door after him; and the fact that there were no robbers about was pretty good evidence that this was his habit.

As I expected, everything was orderly. In one end of the shop was a small boiler and engine; near the center of the room, a saw-table; beside the windows, a work-bench. Two rooms were partitioned off. One was a bee-proof honey-room, and the other a general study, or sanctum, where he can be in seclusion and write his articles for print. In the latter room he showed me his Hammond type-writer, the machine that does the nice work he sends out. I found it was very simple, and easily operated. A large telescope, mounted upon a substantial tripod, occupied a space upon the floor. The owner not only studies the handiwork of God as he finds it among the bees, but he is delighted with what he learns and sees beyond the vale of this world.

"Mr. Doolittle," I said, "I notice you are interested in one of the branches of optics. Why don't you take up photography, and so illustrate your articles occasionally?"

"Well," said he, laughing, "I had thought of that very thing, but I came to the conclusion that Doolittle had no time with all his other work to fuss with it."

When it is remembered that he does *all* his work in the apiary, wraps and directs all his queens, answers all his correspondence without the aid of a stenographer, writes regularly for several periodicals, makes all his supplies, keeps up a good garden, takes care of a horse, to say nothing of the services he renders to his church and town, we comprehend somewhat the force of the remark, that "Doolittle has no time" for another branch of optics.

He is precise and methodical in all his work, especially so in queen-rearing; and as it is not an easy matter to get help possessing all these requirements, Doolittle prefers to do Doolittle's work.

Upstairs in the shop Mr. D. has a collection of bee-implements, old and new. He showed me a box containing some old-style honey-boxes, which a few years ago, out of the kind *intentions* of a supply dealer, had been sent him by *express*. The charges were $7.50. There was no letter of explanation. Mr. D. paid the charges, and the boxes he has used for kindling-wood. At other times hives and other implements have been sent him, charges paid. He had never even opened some of these packages, as he had no use for them. I take pains to mention this right here, as we have been many times served in the same way. While all this is prompted by kind intentions, don't send stuff without first writing to see whether it will be acceptable.

But, to return: Mr. Doolittle lighted his smoker (a Bingham).

"I suppose," said he as we started, "you don't wear a veil."

"Oh, yes, sir! I do." It's my father you are thinking of."

At this I pulled out my veil, for I carry one with me everywhere, and we together went among the bees.

We looked at the progeny of some of his breeding queens. They were very beautiful. The bands were of a deep yellow, and four in number. Although our friend made no claims as to the fifth, the latter (or what looked like it) showed faintly. The bees from his breeding queens were as handsome as any I ever saw. He did not claim to have originated them, he having obtained them of a bee-keeper who is now out of the business. Mr. L. C. Hearn obtained one of these queens of Mr. Doolittle, and Mr. Timpe, in turn, of Mr. Hearn.

"Now," said Mr. Doolittle, "what next would you like most to see?"

"Suppose we look at some of the cells reared in upper stories. I have my camera here, and I should like to see and show to our readers whether you practice what you preach."

We selected cell-building colonies at random. In the first one we examined there were almost perfect rows of cells built on the artificial bases.

"Hold on a minute," I said, "and I will take a shot at it with my camera. There, I've got it."

"Why," said he, "as quick as that?"

"As quickly as you can snap your fingers," I replied.

So on we examined and photographed four or five other lots of cells; and so all through, Doolittle practices what he preaches.

"You have your apiary in an orchard. I believe I like that better than grapevines."

"I don't like too much shade, said Mr. D. "I have noticed that those colonies under those very heavy shade trees do not breed up as early, or do as well as those less shaded. There are two trees" (pointing to two very densely foliaged apple-trees) "that I shall have to cut out."

About this time Mrs. Doolittle desired him to get some vegetables from the garden. In the meantime I got off upon high ground and took views of the apiary, house, and general premises. The bee-cave had "caved" in recently, on account of the moisture from the bees rotting the boards. To prevent any re-occurrence of such a thing, Mr. D. proposes to use flagging for roof-boards, and then cover with dirt as before.

At dinner we had one of those unconventional bee-talks, in company with another bee-keeper whose name I do not now recall, but who happened to be visiting Mr. D. at the same time; and even after dinner there were so many things to talk about that it was hard to break away.

I oiled my bicycle, fastened the camera under the seat, and was soon on my way, spinning past the shores of another beautiful lake, Otisco by name. This lake, like Skaneateles, is only a short distance from Mr. Doolittle's home. After leaving the lake I wended my way to Marcellus, the home of a once prominent bee-keeper. I continued on my journey, passing teams, until I found myself back in Syracuse. I made the distance in about three hours. I remained in the city over night. Next morning I was in doubt as to whether I should take the train or the wheel. My next run was to be a long one, and I had thought of taking the cars to save time.

As I paid my bill at the hotel, the clerk told me that a "strike" on the New York Central railroad had been inaugurated during the night, and that it was doubtful whether any trains would run during the day. As far as *I* was concerned, I did not care much. As the depot was near at hand, I went over to satisfy my curiosity. Yes, the trains were stopped, and the agents would sell no tickets to would-be passengers. The strikers were scattered here and there. A company of militia were stationed at the depot. One passenger was cursing and swearing. He had got to make an appointment, and his anger knew no bounds."

"I wish I were fixed as you are," addressing me as he saw the bicycle.

I did not stop to swear and curse with him on the event, but started across the track, and, approaching one whom I took to be a striker, said:

"Are you going to pull out today?"

"Guess not, sir."

"Well," said I, *this* train of mine hasn't struck yet, and I think I'll pull out;" and with this I started toward Starkville, thanking good fortune that "strikes" don't stop *all* the wheels of progress, for my wheel at that very moment was spinning along at a rapid rate. I continued until I had gone about 30 miles. I went a little out of my way on account of imperfect directions as to the road.

It being Saturday, and as I could not reach Starkville, the home of Mr. Elwood, without riding on Sunday, I concluded to ride to the next station on the Central railroad, if I could get aboard the cars. I found that there was a *chance* of getting on a train, and fortunately was able to get to Fort Plain toward evening. Starkville, I was told, was about nine miles from Fort Plain. As I saw the hills, some of them fully a thousand feet high, my heart sank within me.

"It is late," I said to myself, "and to go over an unknown and lonely road among those fearful hills is not inviting."

I buckled up my courage and started; and, to my surprise, in about an hour's time I was before the door of Mr. Elwood, the man who manages successfully over 1,300 colonies. The hills were not as bad as they looked, and the road was not as lonely as it seemed.

AT MR. P. H. ELWOOD'S HOME.

I met with a hearty welcome from our big bee-keeper—large in several senses of the word. It was a little embarrassing on my part to come upon a family I had never seen, just at supper time, Saturday night; but when I went to the hotel at Starkville, I was informed that Mr. Elwood had left word that I should come straight to his home, early or late; and accordingly I turned the wheel about, and was soon shooting down (or, rather, up) the road leading to the Elwoods. Their home is situated at the base of a range of hills (I wanted to call them mountains) of anywhere from 500 to 1,000 feet above the valleys. To an Ohio boy this was all new, and I feasted my eyes on the scenery to my heart's content.

The next day was Sunday. I threw off my bicycle suit, and put on ordinary civilian's clothing. As my luggage on the wheel had to be compressed into a tight bundle, my clothing, I fancy, looked as if it had been through a—well a crimping-machine, or something of that sort. I was glad to go to church with the family; and it didn't matter at all, even if their denomination was different from mine. We all love the Lord, and we differ only in unimportant details as to beliefs. I enjoyed the services, and enjoyed, also, being in a God-fearing family for the Sabbath.

The scenery about Starkville, to an Ohio boy, is grand. While the country is not really mountainous it is very, very hilly. From many of the higher summits the whole Mohawk Valley spreads out before you, and off in the distance the dim outline of the Green Mountains can be seen.

Mr. Elwood kindly offered to take me around the country; and accordingly, the following Monday morning, one of the bee-wagons was hitched up, and we took a ride through the surrounding country, to take in some of the sights, and of course, in the course of the day, visited bee-yards. After driving to the top of one of those high hills, and taking a general survey of the Mohawk Valley and adjacent country (a magnificent, view, by the way), we visited a beautiful glen where there were some very curious rock formations—caves, waterfalls, and running springs. My Kodak was in readiness, and I took a number of shots (*i. e.*, views). Vegetable matter that remains for a few years in the water of this glen petrifies. Among the specimens we selected were almost perfect petrified beach leaves, fragments of moss, etc.

It was here first that I noticed what seemed to be true of all this section of country; namely, that the basswoods seemed to grow much more thriftily than in Ohio. The leaves were enormously large. One we measured was 14 inches long, nor did this seem to be exceptional. At Mr. Doolittle's I noticed that the basswoods were of larger and better growth than with us, while on the sidehills of Starkville they were even more so.

We started on our journey again, and were discussing as to whether the large-leafed basswoods were any better for honey than the small-leafed trees, when we drove up to the apiary of J. R. Tuniclliff, of Vanhornsville. Mr. T. owns some 400 colonies in three or four out-yards. He formerly used the ordinary hanging frame; used it faithfully for 50 years. Finally, in 1878, he adopted the closed-end frame, which he is still using. This frame, instead of *standing* upon a flat tin on the bottom of the hive, *hangs* in an ordinary wooden rabbet by means of a projecting headless wire-nail jutting out from the top-bar. In other words, it is a hanging frame with closed-end bars.

In connection he uses a wooden thumb-screw to reduce propolis accumulations. Mr. Tunicliff was very enthusiastic over this arrangement. He declared it the best frame extant. As to the thumb-screw, he owed Mr. Heddon nothing for it, for he borrowed it of Mr. Manum, who had used it for many years before Mr. Heddon. He did not consider Mr. H. the first one to use closed-end frames in a tight-fitting box, for he had used them both in combination since 1878.

He had 400 colonies on these frames; and to show me how nicely they worked he handled several hives. They certainly did work nicely, and as Mr. T. said, he adopted them to save time in handling. The swinging frame took too much time in spacing and too much time all around. He was very enthusiastic over his hive.

BEE-ESCAPES.

Another Method of Getting Bees Our of Section-Cases.

Written for the American Bee Journal

BY ROBERT CARVER.

In nearly all branches of business, men profit by the experience of others, and I must say that bee-keeping is not an exception to the rule. Having been a reader of the AMERICAN BEE JOURNAL, I have many times been benefited by the timely suggestions of those who have been longer in the business than myself, and as even exchange is no robbery, why should not I contribute also for the benefit of others?

Now to the question: How to remove bees from the section-case without smoking them out, or otherwise abusing the bees, and do it quickly. Here it is:

Place an empty hive with the cover off, in front of the one where you wish to remove the section-case, place it about 3 or 4 feet away, and a little to one side from the entrance, so the bees from the field can enter without being disturbed. Now place a straight piece of wood about 2 inches square and 2 feet long, on the ground under each end of the hive, and (place the cover over the hive to keep out robbers) should there be any comb built on the bottom of the case, it should be taken off. (I use a long, wide chisel for this purpose). Use a very little smoke from the "Large Bingham smoker" just to quiet the bees as we work.

Now place the case over the empty hive, so that it fits nicely. (The entrance to the empty hive should be previously closed by nailing a piece over it, so that the bees cannot get out.)

Now jar the hive by raising either end say one-half inch, and dropping it down on the pieces that lie under the hive, in quick succession for nearly half a minute; then raise one end of the case so that it will stand perpendicular, and quickly brush the bees from the bottom of the case with the bee-brush into the hive. Put the case on the ground, or on a board, end upward, take up the hive and empty the bees close to the entrance of the hive, so that they can go in. Place the empty hive back on the pieces, put the case over it, and jar as before, emptying the hive each time, repeating this five or six times when the case is empty of bees and ready to go to the honey-house.

I can empty a case of bees in less than five minutes by this process. My wife usually holds the smoker, and throws a little smoke around the case as I work, to keep the robbers away, and quiet any bees that might feel cross, and so the bees escape out of the case into the hive.

Manton, Mich.

BEE-KEEPING.

A Woman's Opinion of Learning the Bee-Business.

Written for the Farmers' Review

BY MRS. L. C. AXTELL.

Many tons of honey go to waste every year because of no bees to gather it. As a rule, bees do not fly more than a distance of three miles around the hive. Within that radius 200 colonies may be successfully kept, if the land produces the right kind of flowers. White clover is the foremost honey-plant in the United States and Canada; but there are many other plants that yield a bountiful supply. Some years those 200 colonies will gather 15,000 pounds of honey—some years more, but often less; then what enormous amounts of honey must go to waste throughout the world.

I have seen it estimated that of two fields of clover of equal size, side by side, one of which you pasture with bees, the other with cows, that the one pastured with bees will produce a greater weight of honey than the field pastured by cows will have butter and cheese, and the cows will have eaten every blade of clover that is in the field, while the bees only fertilize the clover and make it more productive.

As last year was a good year for bees, many were doubtless induced to try bees, a few for their own honey, and others with intentions of going into it as a business. But unless they are willing to inform themselves how to take care of bees properly, they had better let them alone, as the money paid out for the bees would pay them better if invested in honey. Yet one need not spend a great deal of time in reading; if only he will get a standard book on the subject, and follow its instructions closely, he will be pretty sure to succeed, provided he does not live too far out upon the prairies. I am not quite sure that the bee-business could be very successfully carried on where farm crops make a failure, and where white clover has not grown.

One colony is enough to begin with; then in all my operations I would consult the book; I would at least learn that one book "by heart," as it were, and as my colonies increased, and perseverance held out, I would subscribe for a bee-paper, and add other books.

I would not advise going into the business very steep the first year, in order that you might try yourself a year or two to see if you have stick-to-it-ive-ness enough to succeed, as I know of no occupation that has had so many "backsliders" as the bee-business. If one already has his hands full of business, better let bees alone. I have noticed this in my experience, that a man succeeds better if his wife is also interested, and helps him. Of course he ought to be able to manage one colony alone, but as his colonies increase it is quite important that the wife stands ready to help, if need be.

It has always seemed to me that bee-keeping was really woman's work. Much of it is not heavy work, and just suited to the weaker sex; though, when run on the large scale of hundreds of colonies, it may become heavy work, unless plenty of helpers are employed. Indeed, we can make hard work of anything. Much depends upon whether we like the business or not, whether it is hard work for us or not. Had I my choice to take sole care of 100 colonies of bees, or do the housework for a family of eight or ten persons, I would unhesitatingly choose the bee-work. Of course, I could not lift all the honey (the hives need no lifting); neither could I get my own wood or coal to cook with, or lift the sack of flour or heavy furniture, or carpets in house-cleaning.

Some claim that it is hot work caring for swarms in the hot sun. We should have suitable shade to work under, and keep all the queens' wings clipped, but the heat of the sun is not so hard to be borne as the heat of a stove in cooking or washing; and above all, it will not do to take everybody's advice, as almost every old farmer who has succeeded in keeping his bees alive for a term of years, is sure he knows all about bees. You cannot convince him that the queen is not a "king;" he "has seen him lots of times," and the beeswax is gathered by the bees upon their legs in little yellow pellets! He "has seen it, and he knows it is so."

One is apt to succeed if he be wholly dependent upon bee-books for a year or more, or until experience helps him out; but better still, if one is so situated that he can spend a season with an experienced bee-keeper, or can even have the opportunity of occasionally helping those who have had experience.

Roseville, Ills.

BEE-CAVES.

Their Construction and Use for Wintering Bees.

Written for the Iowa Homestead

BY W. M. BOMBERGER.

For high locations and a well-drained porous subsoil, where the entire cavity can be under ground, the following makes an inexpensive cave, and especially desirable where rock is scarce and brick and mortar expensive. I here give a description of a cave I dug eight years ago. It has cost me $1.50 per year to keep it up, not counting the labor. It was dug for wintering bees. The temperature ranges from 36° to 44°, Fahr. In winter it averages 38°—a little too cool for bees, but I lost but one colony in the last four seasons.

This cave is 6x12 feet. It was originally 6 feet deep. The roof is flat instead of the usual pitch. It was made by cutting a 16-foot plank 2 inches thick in two, laying them flat over the hole, the ends extending one foot over the edge on both sides. While digging it out, these pieces of plank can be laid behind the digger, and the dirt thrown back, saving throwing it out and then back again. Then more plank can be laid and more dirt thrown back until the dirt is all thrown out, and lastly throwing the dirt of the entrance back.

Place the entrance at the corner, and parallel with the length of the cave, either east or south, so you can get lumber into it to renew the roof. When the cave is first dug, put a 12-foot (2-inch) plank across the middle of the roof on the inside, and set several good posts under it to receive the weight in the centre.

Now, in two years, when the plank overhead rots so as to show signs of giving away, I renew the roof from the inside with plank, placing them the other way. When they rot out renew again. A flat-roofed cave can easily be renewed in this way from the inside. A cone roof cannot, and is a nuisance for that reason. Do not trust this work to careless boys or hands, as they might kill themselves.

When you renew the roof, use plenty of posts near the entrance and over where you are working to prevent any accident. If the planks used were soaked well in lime-water, or in some preparation to preserve them, the roof would not have to be renewed so often. Each time I renew, I dig a few inches deeper. The cave is some 7 feet under ground now.

Harlan, Iowa.

WINTERING.

Preparing the Bees for Winter, and the Result.

Written for the American Bee Journal

BY J. A. KING.

I have had a little experience in outdoor wintering of bees which may be of use to some one who has not a good cellar at hand.

A year ago last winter I placed 7 colonies in a row on the south side of the house, thus protecting them from the north wind; I placed a bank of coarse horse-manure along the backs of the hives, and stuffed some of the same in between them. This completed the outside fixing for the winter. The hive-entrances were left open the same as in summer—not even a board was set up on edge in front of the hives.

The reader should know something of the hive in order to understand the situation. It is 24 inches long by 10½ inches deep, 13 inches wide below the rabbets. The 9 brood-frames in the centre take seven-twelfths of its length, leaving a space at each end. These ends give the best possible means for winter packing, either with dry leaves, chaff, or a thick division-board filled with chaff. Sacks of chaff filled the second story. These can be changed during the winter, if need be.

On March 21, 1889, a little pollen was brought in by every one of the 7 colonies, with two others from the cellar. Before the weather changed (on March 25) they all had a good flight, bringing in pollen. Those two from the cellar hardly, I thought, withstood the rigors of spring as well as those wintered out-doors.

Here let me skip to July 4. Two swarms from those wintered outside were put together. There was no choice among the hives, nearly all being in use. One with old sides, double-walled, 2½ inches between the walls, but never packed, was used to hive this double swarm. They quarreled a little at first, but soon settled down to work. Ninety sections, six of which weighed, when well finished, 7 pounds, were put on at once. The result of the year's work was 140 pounds of comb honey—at least 40 pounds more than I got from any other colony.

The strength of the colony kept up apparently undiminished until they were placed in winter quarters, with 18 others, out-of-doors. These were arranged the same as the seven the winter before, only that a board was set up on edge over the entrance to keep out the wind and snow. The result was that one colony starved; the extractor did it. One more also starved, just as any novice might have known; they were clustered on empty combs in the second story. I should have taken out at least three central combs below, and replaced them with empty combs from above, but I did not, and the dead bees soon filled up the passage-ways below, and starvation followed.

Of the 17 colonies none were dead, but two were queenless and worthless. One of the remaining 15 the eye suspicioned as queenless. On examination, a queen-cell just ready to hatch out was found. Destroying this cell at once, I went to a weak colony, found the queen, carried the frame with her upon it, and saw her run in at the entrance of the hive desired, in safety. At such a time it would have been fatal for a colony to remain queenless for many days.

I wish to "drive a nail" right here: These 9 frames, equivalent to 7½ Langstroth frames, have served these colonies through the surplus season. They have wintered on them, not one ounce of feed having been given them. They are just booming, and had young bees and brood the first of May. The 15 have done better than the general average of those kept in the cellar; of the latter, only about 65 out of 200 put into the cellar were of any account. Some of them are extra good, but vary in strength to "no good."

I am now about 74 years of age, and from boyhood have worked in wood, in the cabinet and piano shop. For the last 15 years I have been studying how to make the best bee-hive. I have some now on hand that, with the addition of a little work by the painter, I believe would be worthy a place in the Columbian Exhibition of 1893.

Blue Earth Co., Minn., Aug. 26, 1890.

Are you Going to the Fair? If so, will you kindly send to this office and get a few samples of the BEE JOURNAL, and give them out to your friends there, and get up a club? We will send them to you with pleasure.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Sept. 13.—Susquehanna Co., at Springville, Pa.
H. M. Seeley, Sec., Harford, Pa.

Sept. 26.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ill.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich
Sec'y. and Manager—T. G. Newman, Chicago

SELECTIONS FROM OUR LETTER BOX

Honey from Heart's-Ease.

This has been a very poor season for bees—no surplus nor swarms, except some that swarmed for want of stores. But heart's-ease has begun to yield honey now, and the bees are beginning to build comb, and will probably get enough honey to last until fruit-bloom. This is my fifth year with bees, and I have never known heart's-ease to fail to give sufficient honey to winter the bees safely. I consider it very good winter food, if properly ripened and sealed. There is some golden-rod here, but the bees rarely notice it. I suppose most of the readers of the Bee Journal are aware that the Illinois State Fair will be held at Peoria, Ills., from Sept. 29 to Oct. 3. Let us all go and make a good exhibit, even if it has been a poor season.
S. F. Trego.
Swedona, Ills., Sept. 1, 1890.

Poor Season for Bees.

This has been a poor season with the bees in this part of the country, caused by a mild winter, a cold, wet spring, and a dry summer. My average per colony, spring count, so far is 2 pounds!
C. A. Bunch.
Nye, Ind., Aug. 29, 1890.

Foul Brood Inspectors in Utah.

On page 587 is a short paragraph taken originally from Chas. F. Muth's article on foul brood, wherein is stated that "Utah has a bee inspector in every county, and a 'State' officer drawing pay from the Territory." Bee keepers here would be very happy if such were the case, providing such men were competent; but such is not the case. I have kept and handled bees for six years, and in that time I have not met with an inspector in the discharge of his duties, and if there is an officer paid by the Territory for the purpose named, we cannot learn his name.

The facts that give coloring to the statement of Mr. Muth, is that there has been a law on the statute books, a great deal similar to the statement in the above quotation, but it is not, or cannot be, enforced—it is, and has been a "dead letter." Bee-keepers, at the time this law was passed, attempted to organize a system of the kind before stated, and did have some bee-inspectors appointed, which proved very unsatisfactory, as some were incompetent, and those that were claim to have received no pay for services rendered. The chief inspector, who is an aged man now, said to me, "Young man, I spent a great deal of my time as inspector, and I have not had one cent for it!"

This statement is made to correct any erroneous idea that may be started in regard to the industry in this section, because, as will be seen, the statement of Mr. Muth is unintentionally misleading. We expect to accomplish in the near future the condition of things as stated in the clipping referred to—it is uphill work though, but with an organization, and a little energy, we hope to overcome the few technicalities in our way, and ultimately meet with success.
Jno. C. Swaner.
Salt Lake City, Utah.

Horses Stung by Bees.

Yesterday, Mr. Henry Lee, a farmer, had four horses hitched to a road-scraper, working on the road, and as he was going by Mr. Hastings', something was wrong with the machine, and they stopped to fix it, when Mr. Hastings' bees attacked the horses and stung them so that two died right there, and the other two cannot stand up this morning. The two that died were worth $300. Mr. Lee's son was badly hurt in trying to unhitch the horses. Yesterday was a lowery day—it rained a fine mist the most of the day. The accident happened in the town of Mayfield, Lapeer county, Mich., 2½ miles from this place.
Chas. E. Cushing.
Lapeer, Mich., Aug. 22, 1890.

[While such accidents as the above are to be regretted very much, indeed, they should serve to warn people not to allow sweaty horses to stand near the hives of bees. The bees are frequently unjustly blamed for unfortunate occurrences which result from carelessness or ignorance on the part of drivers of horses. Bee-keepers should take pains to inform those around them of the danger there is in tying or stopping horses very close to bee-hives, and thus avoid the recurrence of such sad and disastrous accidents as the one recorded in Mr. Cushing's letter.—Ed.]

Wintering and Hunting Bees.

There was one "pointer" that I omitted in my letter on wintering bees, on page 357. I bore a ¾-inch hole in each end of the hive half way up, and cover it with wire-cloth, driving a small tack in each corner, which gives them air, as the entrance low down becomes clogged with dead bees, and the live ones smother. I have lost several fine colonies in that way. I intend to improve by putting holes in the same manner on the sides high up, this fall; it requires but little expense and short time. The hole in front I leave open in summer.

We had a great profusion of basswood blossoms in July. My bees have not stored surplus comb honey as last season, but the hives are heavy, and the bees will be in good condition for winter. There are only four hives that they have filled the 28 one-pound sections.

I have noticed several articles in the bee-papers and the New York *World* on hunting bees. I can beat all such hunting, having hunted bees since 1845, more or less. I hear of about 50 runaway swarms that have come in our direction this season, which I hope to have time to look after next month. One came over my fields going northwest, up 20 feet; the boys and I gave chase to the woods, but they left us far in the rear. We had a severe frost on Aug. 22, that "scooped" everything in some places. I have escaped so far.
E. G. Slayton.
Chetek, Wis., Aug. 24, 1890.

Light Honey Crop, etc.

The honey crop with us is light, and prospects poor for any to be gathered this fall, as the drouth has been so severe. There will be but little, if any, surplus. The bee-keepers must make a grand display at the Columbian Exposition, in 1893.
Arthur Evans.
Saybrook, Ills., Sept. 3, 1890.

Gentle Italian Bees, etc.

I have Italian bees, and would have no other in my yard. They are pleasant with children, and will not sting much, even if you sit on their hives, when you cannot come within 10 feet of the black bees. The golden-rod and aster are in full bloom, and the bees are booming on them.
Jacob Shaffer.
South Park, Ky., Aug. 30, 1890.

One of the Vervains—Drouth.

I send you a plant that I would like to know the name of. It has been the plant that has kept our bees alive during the late drouth. We have had some fine showers the past week; the drouth is broken now, and we may yet get enough honey to winter our bees. There is little or no surplus.
S. H. Clark.
Elwood, Iowa, Aug. 21, 1890.

[It is *Verbena hastata*, one of the very numerous vervains. It has long been recognized as a good producer of honey.—Ed.]

Rocky-Mountain Bee-Plant.

I send a sample of a plant that grows wild here. In most places it blooms about the first of August, and grows very rank. The bees work on it all day. I wish you would tell what it is, and if it bears honey. This has been a very poor year for honey here—no surplus yet worth noting.
W. H. Cogil.
Central City, Nebr., Aug. 23, 1890.

[It is the "Rocky-Mountain bee-plant" (*Cleome Integrifolia*). This is a beautiful plant, and is said to furnish large quantities of excellent honey. It grows naturally in the Rocky Mountains, and in Colorado.—Ed.]

Trial Subscribers.—In order to get as many as possible to read the American Bee Journal, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

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BEE JOURNAL

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HONEY AND BEESWAX MARKET.

CHICAGO, Aug. 28.—Comb honey is held very firmly this week, and the prices for white in pound sections range from 16@17c, and some fancy at 18c, but the bulk of the sales are at 17c. Demand is quite good, and more could be sold than is coming. Extracted, 6@8c; there are free offerings of California at 6@7c. R. A. BURNETT, 161 S. Water St.

NEW YORK, Aug. 25.—New comb honey is now arriving, and finds ready sale. We quote: Fancy white 1-lbs. in paper boxes, 16@18c; the same glassed or unglassed, 15@17c; the same, 2-lbs., 14@15c; off-grades, 1-lbs., 13@14c; 2-lbs., 11@12c. Extracted, basswood, 7½@8c; California, 6½@7c; Southern, 65@70c per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

MILWAUKEE, Aug. 23.—This market now offers good encouragement for honey. The old stock of white comb is all gone, and new, choice, 1-lbs. will meet a sweet reception. We quote 1-lb. choice white, 15@16c; good white 1-lbs., 14@15c; fair white 1-lbs., 13@14c; choice 2-lbs., 13@14c. Extracted in barrels, choice white, 7@8c; in kegs and tin, 8@8½c. Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water St.

KANSAS CITY, Sept. 5.—Demand for comb honey continues good, but supply light. We quote: White 1-lbs., 15@16c.; 2-lbs., 13@14c. Dark 1-lbs., 13@14c.; 2-lbs., 12@13c. White extracted, 7c.; dark, 5@6c. Beeswax, No.1, 25c
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Aug. 21.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.: 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, August 6.—Demand is good for the new crop, and receipts are very light. White 1-lbs., 15c.; 2-lbs., 13@14c. Dark 1-lbs. 12@13c.: 2-lbs., 12c. Extracted, white, 7c.: dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Aug. 12.—Very little new comb honey in the market, and it is selling at 14@15c. Extracted, 7@8c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

DENVER, Aug. 7.—Old honey all gone. New crop is arriving freely. Prospect good for a fall crop. We quote: 1-lbs., 14@16c. Extracted, 6@8c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Aug. 15.—New honey is coming in and we are selling at 18c. Extracted, 7@8c. Beeswax, 30c. for fancy yellow.
BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, Aug. 20.—Good demand for comb and extracted honey. Arrivals are insufficient for the demand. We quote best white comb at 14@16c. Extracted at 5@8c. Beeswax is in fair demand at 24@26c on arrival for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

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51D26t 1m1y.

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WE FIND that we have not reserved a single copy of our special edition of the **Companion and Prize Weekly,** and would be much pleased if some of our friends would return us a copy or two. E. L. PRATT, Pratt Bee-Farm, Marlboro, Mass. 37A1t

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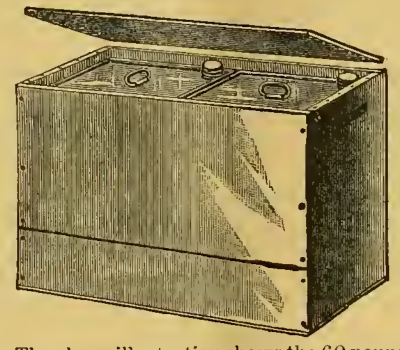
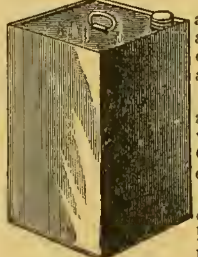


The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



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We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

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1 Single Can	(boxed)	$ .45
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12 boxes "		8.40
100 " "		65.00

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The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

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PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Sept. 20, 1890. No. 38.

I'll Not Confer with sorrow
Till to-morrow ;
But Joy shall have her way
This very day.

* * *

H was a letter which figured conspicuously as the initial letter of the names of exhibitors. Just at the landing up-stairs—there was the exhibit of M. H. Hunt—then followed O. L. Hershiser's—then came W. Z. Hutchinson's. Another who made several entries, but the goods did not arrive in time, was R. F. Holtermann—all the names beginning with H. The principal lady exhibitors were Miss Anna Cutting and Mrs. S. Bennett.

* * *

The Tune has Changed.—The Kansas City honey market report on page 637, says that "the demand for comb honey is larger than the receipts." Yes ; and it is likely to be. Quoting it at 16 cents is a *farce !* Any white comb honey sold at retail for less than 25 cents per pound this year is sacrificed ! Bee-keepers should demand that the very meager crop shall bring all that it is worth. Chicago quotations are 18 cents, but that is too low. Hold on to the product.

* * *

Comb Honey.—We had a pleasant visit from Mr. L. W. Baldwin, of Independence, Mo., last week. Friend B. and his son have an apiary of 850 colonies, and have a product of 25,000 pounds of excellent comb honey, a sample crate of which they left with us. It shows good workmanship—the nice, white sections are in an attractive crate, and the honey is thick in body and of fine flavor, and will no doubt bring a fancy price. They are to be congratulated upon so good a yield in such a poor season.

The Detroit Honey Exhibit was everything that could be desired. Beautiful weather prevailed, and the "swarm" of bee-keepers was generous and kindly disposed. A reporter for the Detroit *Tribune* is responsible for this which follows a notice of the honey exhibit :

> The busy bee, like the ant, can always give a lesson to the sluggard, and even to the wisest of men. The intelligent little workers carrying on their prosperous communality in that business-like way of theirs, have attained to that Utopian government for which all men are sighing. Precise in their instincts and workmanship, sanitary to an astonishing degree, full of reverence for their queen, wisely provident for their necessary but lazy drones, having absolute command not only of their living selves, but enjoying a power to regulate the number and kind of new bees which shall be born into their little cosmos, the hive. The bees are a delight for the poet, a parable for the teacher, and a study for the philosopher.

The Superintendent, friend H. D. Cutting, did nobly in getting up such a fine exhibit, when the crop was so short. In fact, some of the exhibits represented the *whole crop* of the exhibitors. It took more than an ordinary amount of energy to get up the excellent display which was a wonder and admiration to every beholder.

The most attractive display of Comb Honey was made by O. L. Hershiser, and his premium was $35 ; second, M. H. Hunt, $20 ; third, W. Z. Hutchinson, $10.

Best specimen of 20 pounds—Mr. Hershiser first, $10 ; and Mr. Hutchinson $5.

In extracted honey the best display was made by Mr. Hutchinson, and his premium was $35 ; second, Mr. Hunt, $20 ; and third, Miss Cutting, $10.

Best specimen of 20 pounds—Mr. Hunt carried off the first premium of $10 ; and Miss Anna Cutting the second, $5.

In beeswax, Mr. Hunt showed some excellent cakes from the apiary of Miss Lucy A. Wilkins, of Farwell, Mich., whose articles, some years ago under the nom-de-plume of "Cynla Linswick," were so interesting.

In bees, Mr. Hutchinson had a grand display in uni-comb observation hives. Italian, black, Carniolan, Cyprian, etc., and his premiums amounted to $40 on these.

In comb foundation, both for brood and sections, Mr. Hunt took $40 for making, on the grounds. Miss Cutting had the best ready-made samples, and was awarded $12.

The display of honey candies, fruit preserved in honey, honey pastry, and honey vinegar was excellent.

For the largest, best, most interesting, attractive and instructive exhibition, Mr. Hunt got $35 ; Mr. Hutchinson, $20, and Mr. Hershiser, $10.

For the most attractive display of comb and extracted honey made by a lady, Miss Anna Cutting received two first premiums, amounting to $40, and Mrs. Hutchinson and Miss Hunt $10 each.

Mr. Hunt's display was large and ingenius, and was ornamented by colored trimmings and banners. It was 40 feet long, and occupied nearly one-half of all the space devoted to the exhibit. His stand was lined with a fancifully molded balustrading of beeswax, and over the blue archway at the centre sat an old-fashioned bee-hive.

Mr. Hershiser's exhibit was imposing—one that is over-powering by its magnificence.

Mr. Hutchinson showed a pyramid about 10 feet high, made of comb and extracted honey, and was truly grand and charming.

Miss Anna Cutting, not to be out-done, had two pyramids made with comb and extracted honey, the tallest being about 8 feet high, and the other about 4 feet.

Exhibits which are to benefit bee-keepers should be so attractive as to cause an exclamation by beholders—then the intent is accomplished. An impression is made that will be impressive and lasting. Colored bunting and flags are excellent to adorn the walls for a background, but the exhibit itself should with its magnificence and grandeur captivate the spectator.

* * *

☞ The Missouri and Kansas Inter-State Fair will be held at Kansas City, Mo., Sept. 22 to 27, 1890. Premium lists may be obtained of R. W. Cunningham, Secretary. No attention is paid to bees or honey.

* * *

☞ By the *British Bee Journal* for Sept. 4, we notice that a honey show at Wigtown, announced for the 19th inst., is abandoned because of the failure of the honey crop. Bee-keepers on both sides of the Atlantic Ocean can condole with one another in the honey crop failure this year.

* * *

☞ The Salt Lake City Fair will be held from Oct. 6 to 10, 1890. Premiums amounting to $13.50, are offered for bees and honey. In future years we may hope that more liberal premiums will be offered, and more creditable exhibits will be the result. Our friend, John C. Swaner, will, no doubt, make as creditable an exhibit as possible, and take the premiums.

* * *

Held His Breath.—That is what the Rev. L. Johnson, of Walton, Ky., says he almost did when reading Chapter XIII of "Scientific Queen-Rearing," by G. M. Doolittle. His enthusiastic remarks are as follows :

> I have just finished reading Mr. G. M. Doolittle's book on "Scientific Queen-Rearing," and must truly say it far exceeds anything on the subject I have ever read. His discoveries are certainly remarkable, and cannot fail to be of great value to the bee-keepers of America. God bless him for what he has done for us in the little in this little book. I thought Mr. Alley had exhausted the subject in his "Bee-Keepers' Handy-Book," but Mr. Doolittle has opened to us a new field of which I never dreamed. I almost held my breath in amazement as I read Chapter XIII.

GLEAMS OF NEWS.

White Clover not only yielded no honey in many places in North America, but the same thing occurred in England. In the *British Bee Journal* for Aug. 14, we find the following editorial remarks :

> *Apropos* of our observations on honeyless white clover last week, it would seem we are not alone in feeling the peculiar effects of the present season. The AMERICAN BEE JOURNAL just to hand has a communication headed "No Honey in White Clover," in which the writer, after declaring the honey season to be a failure, says : "All this took place amidst a sea of white clover, too. I never saw so much white clover before in my life !"
>
> It is certainly a remarkable experience of what is justly called the "queen" of honey-producing flowers when on two continents, 3,000 miles apart, the same absence of nectar in clover bloom occurs. How far the recent warmth has succeeded in restoring the prestige of the plant in the eyes of British bee-keepers a few days will show. We saw bees working on it busily enough on Bank Holiday, when the clover bloom was without doubt yielding honey within ten miles of London.

The cause of the lack of honey in the clover during the past summer is not yet discovered. We have noticed, however, that there has been considerable complaint about its causing salivation of horses, by some quality in it having excited the salivary glands to a considerable degree.

A correspondent, who is a physician, says that he has tasted the second crop of white clover this year, and found it to be "excessively *acrid*" and unpalatable. This may account, in part at least, for the lack of honey from white clover, especially where the bees got no honey, even when they were surrounded by "a sea of white clover," as reported by a correspondent and published last month, and also referred to in the foregoing excerpt from the *British Bee Journal*.

It might have been distasteful to the bees, as it was to our friend, the M. D. They would then let it severely alone, and it is better so than for them to have gathered honey that might have been injurious to the honey market as well as to the honey consumers.

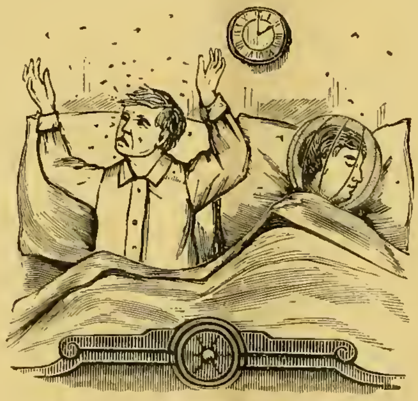
In some cases the drouth was unquestionably responsible for the lack of honey. Between both causes, but very little white clover honey is now to be found on the market. The fall honey crop this side of the Atlantic, as well as in Europe, has been quite encouraging. Fall flowers have been abundant since the rains of August came, and we confidently hope for a sufficient quantity on which to winter the bees ; and in some places we are assured that a surplus crop will be gathered. Take it all in all, it has been the poorest season for many years.

* * *

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

Our Residence is nearly surrounded with trees, and the late rains have produced millions of mosquitoes, which have been harbored under the leaves of the trees. The leaves are now falling, and the singing, biting nuisances are seeking other quarters. They are so small that they get through the wire-screens of our windows, and for several nights have made life almost intolerable by their poisonous bites, and diabolical singing.

For protection against these unwelcome, nocturnal visitors, we now use the Globe Veil, and our enthusiastic joy over the result is our only excuse for mentioning it in this public way. We unbutton the brass collar before going to sleep.



Sleeping Impossible. Sleeping in Comfort.

If any of our readers are similarly troubled with mosquitoes, our very best advice is to get a fine bobinet Globe Veil, and defy the little intruders ! Then all may obey the injunction : "Sleep on now, and take your rest !"

We can send one made of the finest bobinet, especially for this purpose, for a dollar ; the comfort and pleasure derived from its use will be worth many dollars.

Besides this, it is so handy for use in the apiary when working with the bees.

* * *

Canadian Apiarists are considerably exercised of late about a supply dealer by the name of R. E. Smith, who has been selling Comb Foundation which was badly adulterated, and trying to palm it off as Dadant's foundation. He offered it at *retail* for less than Dadant's wholesale prices. When such is the case, buyers may be sure that there is deception somewhere. Beware of any article that is offered at unreasonable prices, unless a valid reason is given for such sacrifice.

* * *

Thirty Years Among the Bees is the title of a new illustrated pamphlet of 75 pages, by Henry Alley. It gives the results of the 30 years' experience of the author in rearing Queen-Bees, with all the latest methods brought down to the present time. Price, **50 cents.** For sale at this office.

Musical Telegraphy.—We noticed in the New York *Electrical Review* of Aug. 16, 1890, that Dr. G. P. Hachenberg, of Austin, Tex., one of our regular correspondents, is registered to exhibit his Musical Telegraphy in the St. Louis Electrical Exposition to be held this fall.

The Doctor shows remarkable tenacity in holding on to his invention, and must have great confidence in its final remarkable success. "Godey's Ladies Book" for March, 1864, gives an account of his Musical Telegraphy, with proof that he was the original inventor to transmit sound by the aid of electricity, which received the attention of the Government in its action against Prof. Bell.

What is of local interest to us is, that according to the Chicago *Times*, of April 9, 1869, he delivered a lecture on Musical Telegraphy in the Crosby Opera House. It was then proposed by several scientists in the audience to make Hachenberg's Electro-Music a Chicago enterprise ! This may yet prove the case, for we have information that the subject will be brought before the Commissioners of the World's Fair, with the view to characterize the great Exposition with this order of music (a music that was never excelled before), as it was once favorably acted upon by the United States Centennial Commission, as we see in their printed proceedings for 1872.

The Doctor is the originator of several electrical inventions, and ranks as one of the great electricians of the age. His last "Electro Air-Line" has been illustrated in more than a thousand newspapers in this country.

It should be no matter of surprise to see extensive electrical demonstrations in his large apiary in which he takes a lively interest. The grounds of his apiary are strung with wires, air-line carriages, hidden batteries, hives fixed on bottles, mimic lightning streaks flashing over the grounds, from revolving mirrors propelled by wind, etc. The honey-house has an electrical paraphernalia much of the same order. Out-doors, electrical experiments are conducted to prevent swarming and robbing ; in-doors, to prevent the granulation of honey, clearify honey, etc. We are promised a report of the results of these experiments after they are once fully completed.

* * *

☞ A Warwick farmer had a gang of tramps in his yard a few days ago who refused to obey his orders to "move on." He showed a remarkable presence of mind when he overturned a hive of bees. The tramps disappeared, but not until many had suffered.—*Exchange.*

* * *

The Species of Wild Bees are quite numerous, there being, it is said, 4,500, of which 170 are in Great Britain : of wasps there are 1,100 species, of which 16 are found in that country.

Migratory Bee-Keeping is by some thought to be a *new* thing, but it has been in practice for 2,000 years in Egypt and the East. A reporter for the Chicago *Herald* is responsible for the following, which he evidently thought was a *news* item :

An apiary on wheels is one of the latest innovations in California. After the foot-hills have been pastured, the bee-herder moves his bees to a higher elevation, where the industrious insects gather the nectar stored in the blossoms of the clover and other plants, and when these have been relieved of their saccharine matter, the bees are again moved to a higher elevation, where flowers peculiar to their region yield up their sweets to them.

Short Rations.—The drouth of last year, followed by hard freezing before snow fell, was very injurious to clover all over the Northwest. The same conditions that destroyed the clover plants also injured or killed many of the biennial flowering plants. The effect of this has been very marked upon the honey product of the country. The reports from all parts show a considerable falling off from the yield of previous years ; while there is no doubt a combination of causes for the failure, it is but reasonable to conclude that the destruction of so many honey-producing plants has been one of the important factors.—*Farm, Stock and Home.*

Another Test for Beeswax.—If any of the victims of adulterated wax wish to experiment a little on their own account (says the *Canadian Bee Journal*), here is a simple test, which we find in "Cheshire's Bees and Bee-Keeping," as being the one given by Mr. Otto Hehner, the analyst of the British Bee-Keepers' Association :

Take a piece of undoubted pure beeswax and cautiously mix alcohol (methylated spirit) with water until the wax just sinks; a piece of beeswax adulterated would, in the same test fluid, rise to the surface. The test must be applied, however, with great care, as any air bubbles in or on the piece to be tried might lead to its being condemned unjustly.

The Annual Fair of the Washtenaw County Agricultural and Horticultural Society is to be held at Ann Arbor, Mich., Tuesday, Wednesday, Thursday and Friday, Sept. 30 and Oct. 1, 2 and 3, 1890. Premium lists may be obtained of Jas. R. Bach, Secretary, Ann Arbor, Mich. The premiums for comb and extracted honey and beeswax amount to $5 for first, and $2.50 for second premium. Such premiums will never call out a respectable exhibit.

Are you Going to the Fair ? If so, will you kindly send to this office and get a few samples of the BEE JOURNAL, and give them out to your friends there, and get up a club ? We will send them to you with pleasure.

QUERIES and REPLIES.

Proper Size of Frames to Extract Honey From.

Written for the American Bee Journal

QUERY 729.—In running an apiary exclusively for extracted honey, what is best —combs half the size of brood-combs, or the same size as brood-combs, to extract from, in using the Quinby frame ?—J. O. T.

I use full sized frames.—G. M. DOOLITTLE.

The same size as brood-combs, wired.—MRS. L. HARRISON.

Half size, with closed end-bars.—R. L. TAYLOR.

I should use all frames alike.—C. H. DIBBERN.

I never used the Quinby frame, but I am favorable to small frames for extracting from.—EUGENE SECOR.

I use a smaller frame than the Quinby, and have full size and half-size frames, and I prefer the latter.—M. MAHIN.

The combs in small-sized frames, as a general thing, are not as easily broken in extracting as those in frames of the size of the Quinby. But with care, the combs in the Quinby frames can be extracted without trouble.—J. P. H. BROWN.

I think that I should prefer them half-size. A Quinby frame full of honey would be quite heavy. I use Langstroth frames, and like the size for extracting.—A. B. MASON.

Half-size are more convenient with the disadvantage that they cannot be used interchangeably with brood-combs.—C. C. MILLER.

I prefer to have the same size of combs. I do not use so large a frame ; but I think that I should wish all the same, even if I did.—A. J. COOK.

I have no experience with the Quinby frame, but I think that it is too large a frame for easy manipulation in extracting —and that is the reason, if I was obliged to use such a frame, I would prefer the half-size.—P. L. VIALLON.

I have never used the Quinby frame, but on general principles I should say the full-sized frame would be the better. I know that it is with the Langstroth frame.—J. E. POND.

I much prefer small combs for extracting. The "Nonpareil" brood-frame, size 7x17 inches, is very easily handled, and admirable for extracting.—G. L. TINKER.

We prefer half combs, as the full combs are too deep to be furnished a full story at a time. On the other hand, the full-size comb are rather inconvenient to handle. We have tried both, and decidedly prefer half-stories, even with Langstroth frames. —DADANT & SON.

Shallow combs are so advantageous that were I using the Quinby frames, I should use half depths to extract from ; and one other thing I would do, would be to get rid of the Quinby frames, and use frames all alike, and very shallow ones at that.—JAMES HEDDON.

I have never used the Quinby frame, but on general principles I prefer all the frames to be of the same size. The Quinby frames, however, are large, and it may be desirable to have them one-half size. I prefer and have used the Langstroth frame only. —THE EDITOR.

Introducing a Queen to a Queenless Divided Colony.

Written for the American Bee Journal

QUERY 730.—In dividing for increase will it be advisable to introduce a queen into the queenless portion of the artificial swarm immediately after dividing, or would it be better to wait a few days before giving them a queen ?—Nebraska.

I would wait.—J. P. H. BROWN.

I do it at once.—A. B. MASON.

It may be safest to wait a couple of days. —EUGENE SECOR.

Introduce the first night after dividing.—MRS. L. HARRISON.

Give a queen at once, if you can conveniently do so.—G. M. DOOLITTLE.

Introduce a good laying queen at once, every time.—C. H. DIBBERN.

If you have queens to spare, better introduce them at once.—DADANT & SON.

If we have the queen, I should prefer to introduce her at once.—A. J. COOK.

If I divided that way, I should want each part to have a queen as soon as it could *safely* have one.—C. C. MILLER.

I always prefer to introduce a queen at once, unless I have enough combs with brood to give them occasionally to make up for the loss of time.—P. L. VIALLON.

For introducing virgin queens, I would have the colonies queenless seven days. Introduce laying queens at once, in a cage. —R. L. TAYLOR.

All depends. No one can lay down a rule for introducing queens. Everything depends upon the immediate condition and circumstances.—JAMES HEDDON.

I prefer to introduce a queen at once, as I can see no good reason for waiting ; that is, provided I had surplus queens, or could procure them easily.—J. E. POND.

If you have a queen at hand, introduce her at once, but leave the old queen on the old stand ; otherwise, bees returning from the other hive may kill your new queen.—M. MAHIN.

The queen should be given, caged of course, as soon as the queenless portion discovers that they have no queen, or about two or three hours after the division is made. I believe it to be better to so wait in introducing generally, as I find the bees then build fewer queen-cells, and often none.—G. L. TINKER.

Introduce a laying queen, in a cage, at once, so that each part of the divided colony may have a good queen, and may continue to build up by increasing numbers.—THE EDITOR.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, in Springfield, Ills., at 10 o'clock, a.m., on Sept. 26, 1890. Come, and let us have a good time.
C. E. YOCOM, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. FEHR, Sec.

The Song of the Bee.

Buzz, buzz, buzz !
This is the song of the bee,
Her legs are of yellow,
And voice is quite mellow,
And yet a good worker is she.

In days that are sunny
She's getting her honey ;
In days that are cloudy
She's hoarding her wax ;
On buckwheat and lilies,
And gay daffodillies,
And columbine blossoms,
She levies a tax.

Buzz, buzz, buzz !
The sweet smelling clover
She humming hangs over ;
The scent of the roses
Makes fragrant her wings ;
She never gets lazy ;
From thistle and daisy,
And weeds of the meadow,
Some treasure she brings.

Buzz, buzz, buzz !
From morning's first gray light
Till fading of daylight,
She's singing and toiling
The summer day through.
Oh ! we may get weary,
And think work is dreary,
But 'tis harder by far
To have nothing to do.—*Selected.*

CORRESPONDENCE.

HIVES.

Large or Small Hives in Honey-Production—Which ?

Written for the American Bee Journal
BY G. M. DOOLITTLE.

It would seem by reading page 550, that Mr. Dadant, like the "Children of Israel," as we are told in the "good book," must have "precept upon precept, line upon line, here a little and there a little," before he can understand the position taken by us who believe that a large brood-chamber is not the thing to use when working for comb honey. This being the case, let me try again and see if I cannot make it a little plainer for him.

I believe that it is conceded by all, that no colony of bees in early spring needs so large a hive as they do in the latter part of June when the storing season commences, and when the bees are more numerous than they were three months previous.

At the beginning of the season, or, say the middle of April, in this locality, a hive just large enough to accommodate the bees with ten pounds of honey, places them in the best possible condition for the next month to come. During this month they will have converted the ten pounds of honey into brood, when they are ready for more room, for, as a rule, when this honey in such a small hive is turned into brood, the combs contained by it are practically full of brood.

If we now add one or two frames of honey at the sides of this brood, we again place the bees in splendid condition for ten days more, at which time honey will be coming in slowly from the fields, so if the queen needs more room, frames of empty comb should now be added, instead of frames of honey, thus enabling the bees to use this honey for brood purposes, rather than storing it in the brood-combs ; or, in other words, keeping that which would now be set in, if we still used combs of honey.

In this way the colony is worked, keeping just the right amount of room in it which the queen can keep filled with brood until the honey harvest really commences. When this occurs, we do not want any more in the brood-chamber than has become filled with brood up to that time ; but the rest of the room needed now, is to be added by way of a surplus arrangement.

Now with me and many others, it has been found that the average queen will not occupy more than nine Gallup frames, or eight Langstroth frames with brood before the main honey harvest commences, therefore I set such down as the right size of brood-chamber for me to use.

In Mr. Dadant's fifth and sixth paragraphs, I see he failed to correctly read my article on page 503, for he there quotes me as saying what cannot be found in my article. What I did say was, that *at the beginning of the season* 2 colonies were set apart for special purposes—one to be worked for comb honey, and one for extracted honey ; and, I may add, that when set apart neither had brood in over four combs ; hence the "trap" which he thinks has caught Doolittle, has another "D" in it. The colonies were both worked on the above plan until near the honey harvest, and both kept in my usual hive until then, when the one worked for extracted honey was put into a "long idea" hive, for the reason that I want a large hive for extracted honey—not a large brood-chamber.

In those days, perforated metal was unknown, hence the queen could not be restricted, so she had her own way, filling the combs with brood to the amount of 15 frames full, all of which above the 9 frames full, became useless consumers, or mostly so after the harvest was past.

This brings me to a point that is overlooked by nearly all the advocates of large hives. A large hive when worked for comb honey is almost sure to give one of two things which results in loss to the apiarist, viz :

The first is the one mentioned—that of rearing useless consumers. The queen will often begin laying rapidly at the beginning of the honey harvest, spreading the brood further and further, the workers using the honey that is being gathered to feed this brood until near the close of the honey harvest, when they seem to realize that they must retrench.

They now store honey in the combs as fast as the brood hatches out, only to be consumed by this same brood when hatched out into bees, after the honey harvest is past. Consequently we are taking of the best part of our honey harvest to feed this brood, which is to eat what is left after they are hatched.

I have seen hundreds of hives in neighboring apiaries, years ago, that were black with bees, nearly all over, in August, hanging on the outside of the hive idle, day after day and week after week, until they died of old age.

The second is, that instead of the queen spreading her brood as above, when the honey harvest commences, the bees fill the combs not filled with brood with honey, so that instead of the first honey going into the honey-boxes, it goes into the brood-chamber. As the brood hatches out, more room is given for the storing of honey below, and so the bees keep storing there till the end of the season, which results in having about one-half the honey we should have obtained, stored in the brood-chamber in unsalable shape, while the colony is in poor condition for winter, they having too few bees for wintering safely.

If Mr. Dadant will turn to page 127, of "Mysteries of Bee-Keeping Explained," he will see that as long ago as 1865, Mr. Quinby realized something of these difficulties while using a hive similar to the one Mr. D. is now using ; for he there tells us how the extra comb, or that not filled with brood, can be filled with inferior honey, by feeding just prior to the honey harvest, "so that when clover appears there is no room for the clover honey, except in the boxes."

Why I said that I would use large hives for extracted honey, is for the reason that I like to use the same size of frames for extracting as I use in the brood-chamber. If I were to use an odd size of frame to have the honey stored in for extracting, as some recommend, then I would use no larger hives for extracted honey than for comb honey.

As to the relative prices of the two kinds of honey, I notice that Mr. D. quotes Mr. Root's selling price, and then argues from these prices. Mr. Root buys very little, if any, honey from New York State, hence his prices have little or nothing to do with us.

A neighbor of mine shipped extracted honey, of the very best quality, to New York last year, and comb honey with it in the same car. He told me that the extracted honey netted him 6 cents a pound, while the comb honey brought him 15 cents, clear of all expense. Thus we have at the present time $2.39 more for 309 pounds of comb honey than we would have for 566 pounds of extracted honey.

Until extracted honey brings readily two-thirds as much as comb honey, I prefer to work at producing comb honey. Why I say "readily," is because, with me, extracted honey always drags, while comb honey sells quickly.

Borodino, N. Y.

HONEY.

The Article that Costs a Dollar Per Pound.

Written for the Western Plowman

BY C. H. DIBBERN.

September sometimes gives us quite a dash of fall honey, but if it turns out like everything else this year, it will not amount too much. If it will only put the bees into good condition for winter, we shall be well satisfied. It has certainly been a very peculiar season, and as far as bees and honey go, a very unsatisfactory one. But very little comb honey has been secured, in a marketable shape, and there is no new honey in the market, at least in our home market. I do not think that merchants and dealers yet realize how very short the honey crop will be. The places where a reasonable crop has been gathered are so few and so limited that it will be but a drop in the bucket to supply the 66,000,000 people of the United States, to say nothing of the rest of the world.

HONEY WORTH $1.00 PER POUND.

The prices quoted in our general markets are still very low, but then these chaps have little or nothing for sale, and I imagine when they come to really have honey to sell their prices will be much higher. Why, a dollar a pound would not pay us for all we have produced this year, and we can name a great many bee-keepers who have done no better. Of course any such figures are almost out of the reach of any one, even for medicine, and it will make little difference to us, as we have none to offer.

It will not be necessary to give directions for packing, marketing and shipping the crop, as many of us will have hard work to get enough to butter our own biscuits. Well, now would be the time for those smart ones who have been manufacturing comb honey from paraffine and glucose, if it could be done. That it cannot be done has been shown over and over again, and it is pretty certain that such a thing never will be done. It is wonderful however, how this story is kept going the rounds of the papers, and how many variations can be made of it.

Another thing that bee-keepers have been accused of, without any foundation, is that they feed sugar syrup to the bees in such quantities that they will be compelled to store it in sections, and that this honey is sold at a great profit, as white clover honey. Why, they tell us you can buy granulated sugar for 7½ cents per pound, and nice honey is worth 15 cents, and surely there is a big profit! When this matter was first brought up, I thought to myself that there was something in it, and that perhaps it was practiced by some bee-men who report such fabulous crops.

I have lately experimented some in this direction, and have been forced to the conclusion that with honey at anything like present prices, it won't pay. To say nothing about the questionable honesty of such a thing, it must be remembered that the bees in no way change the syrup fed to them, and that although stored in comb, it is not equal in quality or appearance to our fine clover honey.

Experiments also show that it requires fully two pounds of granulated sugar to get the bees to store one pound of honey, and this would bring the actual cost up to 15 cents per pound. Then sections and comb foundation also cost money, and it is lots of bother to prepare and feed the bees.

Some may doubt that it requires two pounds of sugar to produce a pound of this kind of "honey," and ask what becomes of the other pound. Well, this constant feeding greatly stimulates the bees, and they commence breeding rapidly, which consumes large quantities of stores, and it requires some 20 pounds of liquid sweets to produce a pound of wax. Then the extra labor and activity consumes more food, and that is what becomes of fully one-half the honey or sugar syrup fed to them.

Now any one can easily figure out that this kind of "manufacturing" honey does not pay, as the actual cost in cash would not be much less than 20 cents per pound, and that it is not much practiced, even in very poor seasons like the present. What bee-keeper would care to invest 15 to 20 cents per pound in a questionable sort of honey, at present prices for a good quality of genuine honey? Had he not better go to some place where honey is produced, and buy of some brother bee-keeper, and supply his customers with a fair article, or otherwise frankly acknowledge that he has none to sell?

IMPROVE THE STOCK OF BEES.

Is there anything that the bee-keeper can do in a poor season to make the business pay? This is a question that has bothered me a good deal, and after much thought I have come to the conclusion that there is not. The best that can be done is to keep everything in shape, and see that the bees have stores enough to live on.

Something, of course, can always be done to improve the stock. If there are any colonies that are very cross, or not up to the standard in any way, their queens should be exchanged, for choice ones. But as to making any money out of the business, it cannot well be done. Even if one became so discouraged as to wish to sell the bees and all the fixtures, he would find that in a poor season no one wants to buy. All that can be done is to "watch and wait" for that "good time coming."

FEED FOR WINTER STORES.

One thing must be attended to now, if we expect to have our bees alive and in good condition next spring; that is, see to it that every hive is supplied in the early part of September with stores enough to carry them through the winter. In some sections the bees may gather an abundant supply from the fall bloom, but in others they will have to be fed.

If this is not attended to now, they must starve during the cold months and early spring. Every colony ought to have at least 20 pounds of sealed honey when cold weather sets in. It is perhaps better to do some feeding in the spring, as that will then greatly encourage breeding. Store away all the empty hives and fixtures where they will be safe, so that we may have them when needed again.

Milan, Ills.

IOWA.

Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal

BY EUGENE SECOR.

The Iowa State Bee-Keepers' Society met at their Tent on the Fair Grounds at Des Moines, Iowa, on Sept. 3, 1890, with President Thos. Chantry in the chair, and Wilson Sherman as Secretary. No programme nor order of business had been arranged. After some informal discussion of various matters, and after the report of the

Treasurer, and reception of members for the ensuing year, the convention proceeded to the election of officers, which resulted as follows:

President, Eugene Secor, of Forest City; Vice-President, C. D. Levering, of Atlantic; Secretary, Thos. Chantry, of Casey; and Treasurer, Wm. Kimball, of De Witt.

President-elect Secor reminded the bee-keepers that the International American Bee-Association had honored the State by appointing their next meeting at Keokuk, on Oct. 29, 30 and 31, 1890, and urged all bee-keepers who could to attend. On his motion it was decided to affiliate with the International Association, and steps were taken to represent the State Society by delegates.

From nearly all parts of the State came the same complaint—no honey, or only a meager crop. Notwithstanding this fact, the show of honey was good at the Fair. The principal exhibitors in this Department were J. W. Bittenbender, of Knoxville, William Kimball, of De Witt, Jos. Nysewander, of Des Moines, and Levering Bros., of Atlantic. The discouragements of a bad season did not dampen the ardor of these enthusiastic gentlemen. Their tasty displays added to the interest of the Fair.

It is proposed to have a rousing meeting next year. If the bee-keepers of the State will unite their efforts, and bring their united strength to bear upon the Directors of the Agricultural Society, we shall not always be sandwiched between the cabbages and pumpkins. What we need, is a building set apart for the honey exhibit and apiarian supplies.

The convention adjourned until the afternoon of Sept. 4, for the discussion of such questions as should be deposited in the question-box; but as the writer was obliged to leave for home, he was unable to report proceedings.

I invite all Iowa bee-keepers to visit Keokuk on the dates above named. I am sure you will enjoy it.

Forest City, Iowa.

CARNIOLANS.

An Experience with this Race of Bees.

Written for the American Bee Journal

BY S. A. SHUCK.

Had I not stated plainly, on page 488, that *all* of my Carniolan queens had mated with Italian stock, and that the select-tested Carniolan queen was superseded late in the fall of 1889, there might have been some excuse for the attempted fine hair-splitting by Mr. C. L. Fisher, on page 538.

Mr. C. J. Robinson's criticism on page 566, deserves considerable attention, more on account of its very peculiarly suspicious nature, than from any real merit as a criticism.

Mr. Robinson does not appear to have taken into consideration the fact that I may have kept bees—yes, on modern principles—for the past 15 years, and that during that time I could have learned the habits and disposition, together with the desirable and undesirable points of black bees, without necessarily having them in my apiary at the present time, or even having kept them for eight or ten years.

The extreme suspicion with which he points at "such as *he* (Mr. Shuck) calls *pure* Italians," is enough to cause most careful readers to surmise that Mr. Robinson has, at least in his boyhood days, been troubled by seeing "spooks" or "ghosts." He does not know—oh, no (!)—that by persistently breeding from *pure* stock, and always replacing mismated stock with *pure*-bred stock, any practical apiarist can keep from 80 to 95 per cent. of his apiary pure! He is so suspicious, that if we judge him by such rules as are laid down by expert phrenologists, we shall have to say that he is overbalanced in this direction.

But in spite of all this, I feel inclined to be lenient towards Mr. Robinson, since his cause (Carniolans) is so entangled with uncertainties. Allowing all the rules that are given through the different apicultural publications, as to what constitutes *pure* Carniolan bees, Mr. Robinson could not declare *any* colony to be positively pure if it had passed the first generation from the imported stock. As proof of this statement, Mr. A. I Root says, on page 168 of *Gleanings* for 1890, "Unless we import a queen for every hive in the apiary, we can have no assurance that our bees are pure."

On pages 507 and 508 of the same bee-paper for 1890, the editor gives an account of his experience with these bees, and although they were very irritable, he says "they *resemble* very much the Carniolans we had on a former occasion, which were imported."

In the same periodical for 1890, on page 498, the same writer, in speaking of a colony of these bees that are very gentle, good workers, and not disposed to swarm, says: "I shall be very glad to believe that the six or seven colonies of these bees we have tested heretofore, have not been a true type of this race." If it requires the testing of six or seven colonies, and a part of these imported, to get *one* that is typical (?) of the race, it cannot be wondered at that Mr. Robinson could see that "his (Mr. Shuck's) account shows it more than probable he did not in fact 'purchase' a queen that was a straight lineal decendant of the Carniolan race of bees." Surely, if there was money in this "game," Mr. Robinson has six or seven chances to my one, of holding the winning card.

Immediately upon the appearance of my article on page 488, I received a letter from one of New York State's most prominent honey-producers and queen-breeders. The letter reads thus:

> "DEAR SIR:—I have read your article on page 488 of the AMERICAN BEE JOURNAL, and wish to say that my experience with Carniolans has been very much the same as yours, except I have only tested a few colonies. I have had several imported Carniolan queens (Benton's best grade), during the past five or six years, and they are behind the Italians every time except in swarming."

While there have been quite a number of flattering reports concerning these bees, reports in general point positively to the fact that the Carniolans have not anything like fixed characteristics. The imported stock is not at all gentle, and there are no marks by which they can be distinguished from a slight mixture of Italian and black bees.

On page 93 of the AMERICAN BEE JOURNAL for 1889, Dr. Morrison, in describing these bees, says: "They are of a dark gray color—*not orange like*." Mr. A. I. Root says that they are steel blue; others say crow black, while we find in the advertising columns of the *Bee-Keepers' Review*, "Yellow-banded Carniolans;" and this, too, from one of the most prominent queen-breeders in the country. Then comes Mr. E. L. Pratt, in a recent issue of the AMERICAN BEE JOURNAL, and says, "'Purity' should be the watch-word, and I claim that the pure Carniolans should show no yellow."

The "impurity" dodge concerning these bees, has been played ever since they were brought prominently before the public, and the time has come for the demise of this injustice.

If queens bred in Carniola, and exported to this country, produce black, blue and yellow bees, queens reared from this imported stock, will produce bees of like colors. If a majority of this imported stock proves to be only fair to medium honey-gatherers, subsequent generations from this imported stock will do the same; and if 90 per cent. of this imported stock proves to be excessive swarmers, their posterity will do the same; and any attempt to cover up these facts through the disguise of "impurity" is, to say the least of it, a fraud.

If I purchase a select-tested queen of any race of bees, I expect to get the highest type of that race. I consider it my privilege—nay, my duty—to test such bees carefully, and compare results with such other bees as I may have in my possession. This I have done, and while, with the exception of one colony, my experience has been confined to a first cross resulting from pure-bred Carniolan queens mating with Italian drones, I shall claim that such a cross should not increase the swarming tendency, neither should it make any perceptible difference in the honey-gathering ability as compared with the pure stock.

I could not, under any circumstances, have expected as poor results in honey-gathering qualities, had I bred the same number of queens from the most ordinary black queen in the country, and had them mated with Italian stock, as I have obtained from the 25 mismated Carniolans in my apiary this season.

These colonies were in an average condition as compared with my Italian colonies in the spring. Since May 15, the season has been all that could have been desired for brood-rearing, and in spite of all that has been said about the wonderful prolificness of Carniolan queens, I have three or four score of Italian queens that have equaled the best of these Carniolan queens for prolificness.

Although two of the Carniolan colonies have not swarmed, I have over 100 per cent. of prime or first swarms from the 25 Carniolan queen, and some of them have had their heads pinched so long that there are but very few of the Carniolan-hybrids to be seen in the hive at present. Mismated Italian queens have given less than 50 per cent. of swarms, and pure Italians have given but 40 per cent.

These Carniolan-hybrids are the first bees I ever owned that would follow me into the honey-house and try to sting me after the door was shut. They have attacked my neighbor while plowing in the field in front of my house. This field has been cultivated, seeded and harvested for the past six years without any trouble from the bees. But these hybrids have driven the plowman from the field, and he is compelled to wait for a "cold day" to finish his plowing. These hybrids can be handled very nicely during very warm weather, but as the weather becomes cool, such as we had through August, they are almost unmanageable. As it is impossible for the mass of bee-keepers to keep any race of bees without having a large per cent. of mismated queens, this matter becomes of serious import.

A great deal of nonsensical twaddle is being indulged in by a number of apicultural writers on various subjects, but I know of no subject in which this *twaddle* has shown itself so plainly as in the effort to boom Carniolans on account of their "early rising." No better evidence could be given of instability and a lack of true worth. Fidgety bees *never* "get there" when the real harvest comes. Very few flowers yield nectar in cool weather, and especially if it is cloudy. Bees that are hustling around in the "wet and cold" are either very short of stores, or else intent on plundering other colonies of their honest toil, and I have never found such colonies to be valuable as honey-gatherers.

I have consulted three volumes of *Gleanings* and two volumes of the American Bee Journal for reports concerning Carniolan bees, and I fail to find any figures to show that any one has ever compared results of these bees with the results obtained from Italian or black bees in the same apiary. Such comparisons are necessary to arrive at the true worth of the Carniolans, and for any considerable number of the bee-keepers of this country to go to the expense of time and money, together with the unpleasantness attending the introduction of Carniolan blood into their apiaries that I have, is more than I propose to stand without entering a severe protest.

I wish to say to the inexperienced bee-keeper, that if he has bees that he knows will gather honey when there is honey to be gathered, the best thing he can do is to take good care of his bees. If he wants bees that are gentle—bees that he may know *are pure*, both by their appearance and actions—just send to any reliable breeder of Italian bees for a few tested queens; and, take my word for it, you will not be disappointed.

Liverpool, Ills.

SEASON OF 1890

Almost a Failure—Fall Crop Not Promising, etc.

Written for the American Bee Journal

BY W. J. CULLINAN.

Last year the prospects were poor in the beginning, but the season proved to be a very good one in this locality; this year the prospects were good in the beginning, but failed to materialize, and the season turned out to be the poorest in many years. Our bees came through the winter almost without loss, and on April 1 they were as populous as colonies usually are in the middle of May. At that date, the fruit-trees would shortly be coming into bloom, the ground was carpeted with white clover (our main source for summer supplies), and, taken altogether, the prospects were never better for a good honey season.

But, alas! how vain ofttimes are our predictions! The fruit-trees bloomed, but owing to cool and windy weather they yielded but little nectar, and consequently April proved a poor month for the bees; then came May—the month of flowers—and we hoped that things would change, but again we were doomed to disappointment, for May proved to be cooler and windier than April, and ere the month had far advanced, notwithstanding white clover was blooming in profusion everywhere, we were compelled to feed our bees in order to prevent actual starvation; and this state of things continued until the very last of the month, when it turned warmer, and clover began yielding a little nectar.

Then came rosy June—the month of all the months for bees; the Sun shown forth in all his splendor, the winds at last had ceased their tireless, restless roaming, the earth, where unmolested by plow or hoe, was one vast sea of pearly bloom—and it is needless to add, that at last the bees were happy—not less, their keepers.

But having actually gone back in point of numbers during May, they were in poor condition to take advantage of the honey-flow when it came; so June was half gone before they got started in the supers, and now we soliloquized that the clover would last four weeks longer, and we might still obtain a fair crop of honey; but, again we prophesied in vain, for on June 22, a hot wave, unprecedented in this latitude in twenty years, came down upon us; it lasted eight solid days, at the end of which the clover was fairly "cooked," and the figures were made for the bees; they were small—one-fifth of a crop—none did better, but many worse, some obtaining no surplus at all. So ended the summer season of 1890.

The prospects for a fall crop are not flattering, and I am forced to retract a little from what I wrote on page 615, by saying that the Spanish-needle is not so plentiful in the "bottoms" as at first supposed; and owing to the prevalence of northerly winds and cool nights, both of which are unfavorable to the secretion of nectar, the outlook is not bright.

UNITING COLONIES OF BEES.

Owing to colonies dwindling badly during April and May, we were obliged to double up quite a number at the beginning of the honey-flow. Our colonies stand in pairs, and where two weak ones stood together, they were both placed together in a new hive by alternating the frames, first smoking the bees and jarring the hives to get the bees to gorge themselves with honey.

If I had no choice of queens they were allowed to "fight it out," otherwise I destroyed the poorest before uniting. In a number of instances I simply placed one hive on top of the other, after smoking and jarring as before, and they went together nicely. The latter plan is much the easiest and quickest, and I consider it equally as good.

Where a weak colony and a strong one stood together, I removed the weak one to another part of the apiary during the middle of the day, when the honey was coming in, putting two or three of the weak ones together, and the same, or the next evening, they were made into one colony, and the surplus combs, if any, used for extracting. By this plan the strong colonies were made stronger, and enough of the weak ones were put together to make an average colony.

This uniting I consider the most profitable work done in the apiary the past season, for, without it we would have obtained but very little honey.

ROBBING WHEN EXTRACTING.

To avoid robbing when extracting at the close of the honey-flow, I use a tent, and by throwing a bunch of grass or weeds against the entrance, I can return the combs as I proceed, without fear of getting the bees started to robbing.

Quincy, Ills., Sept. 3, 1890.

SWARMING.

A Description of an Automatic Swarm-Hiver.

Written for the American Bee Journal

BY F. D. LACY.

As there are many desirous of knowing the result of my experiments with the swarm-hiver, I will endeavor to describe it. A patent was granted to me on this invention on August 6, 1890.

It is a combination of two hives, as represented in the illustration, without the use of any front entrances, as shown. Therefore the alighting-board and bee-entrance is at the orifice of vacant hive (No. 2) which is provided with a queen-excluding screen at the time of swarming. The tube in the engraving is represented too long.

The closing doors are so made as to come entirely off, and allow the two hives to come close together, and it will be seen that the bees must pass entirely through hive No. 2, in order to reach their home. At first I regarded this as objectionable, but I soon found that the delay of the bees in traveling through hive No. 2, was more than made up by the warding off of robbing bees, and the perfect security of hive No. 1 from the spring winds and stormy weather. The colonies with hives so arranged have done fully better than any others in the yard. This is a point wherein experience is better than theory.

At the time of swarming, the queen-excluding screen is to be adjusted, which is quickly manipulated. It will be seen that hive No. 2 becomes the swarm-receiver, and no mistake about it in all first swarms. But in second swarms it might sometimes fail, in case they issue with a virgin queen, as the queen is sometimes so small that she will pass through the meshes of the queen-excluder. But as second swarms should never be allowed to issue, except in view of increase, this I regard as no objection.

When the swarm issues into the swarm-receiver, it is often the case that the workers will swarm entirely out into the air, but owing to the fact that the queen and drones remain in hive No. 2, the swarm will soon cluster upon the side of hive No. 2, and over the entrance, at which time the two hives should be disconnected, and the opposite orifice of hive No. 2 closed, and the alighting-board placed at the entrance of hive No. 1, where the tube entrance is shown.

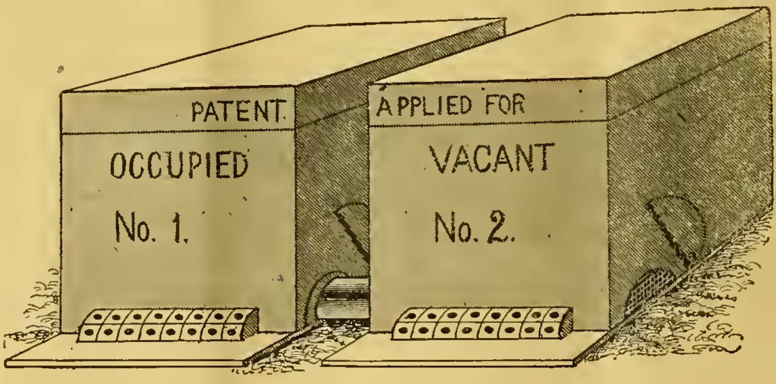
It needs no argument to show that this device is a success. My experience has proven it in every case on first swarms, but I have failed in three or four cases with second swarms, for the reason already given.

I commenced last spring with 34 colonies, two of which were queenless, that I doubled in with others, leaving 32. They increased to 98, after which I doubled them down to but 74 colonies.

The season has been poor, but my bees have done much better than any others I hear of near here. One swarm issued on June 16, and I took from it 70 pounds of surplus comb honey on July 28. I placed in the upper seven brood-frames without divisions, and each frame over-run from 1½ to 3 pounds. I would advise to always use divisions. This was the best yield of any in the yard, but some of the others are doing quite well.

The golden-rod makes yellow hundreds of acres of the forests near, and that growing upon the low land is a great honey-producing flower, but that upon the high ground is not so good.

Lake Co., Mich., Aug. 28, 1890.



Automatic Swarm-Hiver.

GOLDEN-ROD.

It Yields Honey—Entrances to Chaff Hives.

Written for the American Bee Journal

BY C. GERE.

I was surprised to see the answers to Query 726, that bees do not work on golden-rod. Here it never fails when the weather is suitable for bees to work. In some seasons it is our main dependence for winter stores, and this season is one of them, as we have had a very poor season, and many colonies are in a starving condition now.

Three years ago I commenced picking grapes on the first day of September, and picked until the middle of October, and in all this time the bees were so busy on golden-rod that they never came on the grapes to bother in the least, until we had two frosts, and then the last two or three days there were plenty of bees on the grapes.

We have two kinds of golden-rod here—one we call the "square top," which is very early, and grows about two-thirds as high as the late kind, the blossoms running up somewhat in the shape of a corn-tassel. In favorable weather it is as alive with bees as I ever saw them on buckwheat. There are so many different kinds that I would suggest that each one send samples of golden-rod while now in blossom to Prof. Cook, that we may determine which are the best kinds for honey.

In regard to F. E. Merriam having a patent on entrances to chaff hives, I would say that I have used one ever since chaff hives were known. At that time I had a good supply of boxes which I had received with fruit trees and plants, so I used them as follows:

The bottom-board to my hives extend out about 6 inches in front of the hive; this being nailed to two pieces of 2x4 scantling. I would take a bottom-board, place it in the box with the front end close up to the front side of the box, and then make an entrance through the front side of the box, on a level with the bottom-board. Then put the hive on the bottom-board in the box, and if you want a 3-inch space between the box and hive, take a piece of board that wide, and one inch or more longer than you want the entrance; nail to the under side of this board cleats three-eighths of an inch thick, place this between the hive and box to correspond with the entrance of each, then crowd the hive up to it, and put in the packing. This makes an entrance so that the bees can fly whenever the weather is suitable. It keeps out the wind, besides. As every part of the hive is packed, you will of course have to nail a piece on the outside of the box for the bees to alight on.

East Springfield, Pa.

CANADA.

Report of the Haldimand, Ont., Bee-Convention.

Written for the American Bee Journal

BY E. C. CAMPBELL.

The Haldimand, Ont., Bee-Keepers' Association met at the Town Hall in Cayuga, Ont., on Friday, Aug. 29, 1890. The minutes of the last meeting were read and approved.

REPORT OF THE SEASON.

	Col. in Spring.	Col. in Fall.	Lbs. Ext.	Lbs. Comb.
W. Kindree	40	73	1,600	100
Jas. Armstrong	110	160	2,200	800
Jas. Jack	37	67	1,800	
Israel Overholt	25	35	1,150	150
F. Mehlenbacber	25	40	900	
J. H. Best	26	48	800	200
M. Schisler	5	10	350	50
John Bell	13	20		
Alex. Stewart	1	5	35	12
Robt. Coverdale	40	89	900	
A. Hoover	4	14	150	
T. McSorley	8	10	600	
D. H. High	6	12	500	12
E. C. Campbell	14	32	1,600	150
G. B. Jones	80	190	6,300	1,000
Hugh Rose	22	40	700	
Frank Rose	76	140	3,100	150
Henry Smith	4	9	200	

PREPARING BEES FOR WINTER.

Mr. Kindree said he wintered his bees in double-walled hives on the summer stands. He first made sure that each colony had a queen and plenty of food, crowded the bees on as few frames as possible, and put a thick cushion on top of the frames.

Mr. G. B. Jones advocated taking all the honey from the bees, and then killing them, buying new colonies in the spring. For those who packed their bees he recommended the use of hair-felt. He said it was very necessary to have young bees instead of old ones, as old ones eat more honey than young ones; and gave two plans of getting rid of all old bees, the one he preferred being to cage the queen during the month of August, so that she could not lay, than releasing her, and all the bees reared after that would be young.

Mr. Jack puts his hives in a clamp packed with sawdust, and has very little trouble in wintering.

M. Bell wintered his bees in a cellar, and never lost a colony. He put them in at the first frost, and took them out when the willows were in bloom.

Mr. Armstrong winters his bees in double-walled hives and in clamps, with an abundance of packing on top, and all around the hives. He did not like clover chaff for packing, as it had a tendency to heat, and make the bees uneasy.

Mr. Mehlenbacher packed his bees in the same way as Mr. Armstrong, and succeeded very well.

HOW TO PREPARE HONEY FOR MARKET.

Mr. Kindree said that for home trade he used the self-sealing glass jars, and thought they were the best.

Mr. G. B. Jones said the 60-pound can was the best package for shipping, but for the home market there was nothing better than the self-sealing glass jars. For comb honey he advocated the 12-section crate, as it was easier to handle, and not so liable to be damaged in shipping as the larger ones. He also impressed upon the meeting the necessity of giving directions on each package concerning granulated honey, and how to liquify it.

Mr. Armstrong had used for a number of years the 12-section crate, made of light wood, and for extracted honey he used the 60-pound tin. For home use he preferred small glass jars with a screw top.

After a short time was spent in general conversation on a number of matters of interest to the Association, the convention adjourned until evening, to hear Prof. G. B. Jones' lecture on "The Honey-Bee."

E. C. CAMPBELL, *Sec.*

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Sept. 26.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ill.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 10, 11.—Union, at Hamilton, Ills.
Daniel Shank, Sec., Clayton, Ills.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich
SEC'Y. AND MANAGER—T. G. Newman, Chicago

SELECTIONS FROM OUR LETTER BOX

Four Goose Eggs.

I expected to be able to report 4,000 pounds of honey this fall, but four goose eggs represents my crop—0 0 0 0. There is no honey on the market here. This part of Iowa has the poorest crop of honey I have seen in 15 years' experience. All the other crops are good, however, and farmers wear the broadest smiles of any class of people. Just think of it! A farmer buys a piece of prairie for $10 per acre; breaks it up in the spring, and sows it to flax on the breaking; gets 10 to 12 bushels per acre; sells it for $1.20 per bushel, and pays for his land with the first crop! Why shouldn't the farmer be happy? But bee-keepers—my! If you could see our elongated countenances! EUGENE SECOR.

Forest City, Iowa, Sept. 1, 1890.

Bee-Keeping in Nebraska.

I have been appointed bee-inspector for York county, Nebr. We have organized a county bee-association, our county having over 200 bee-keepers in it keeping a few bees, but we find that very few take a bee-paper. The arrangements for the State Fair are good, superintended by Mr. Whitcomb, of Friend, Nebr. We have nearly a failure in the honey crop in this part of Nebraska so far, but we will probably get enough fall honey to keep the bees over winter. R. R. RYAN.

Bradshaw, Nebr., Sept. 1, 1890.

Explanation.

On page 507 I mentioned that A. F. Stauffer & Co. had failed to send me a queen. They have now sent me a queen all right. It was not my intention to class A. F. Stauffer & Co. with Mr. Gray, as swindlers. The fact that Messrs. Stauffer & Co. were behind with their orders, shows that they do a large business.

W. P. FAYLOR.

St. Bernice, Ind., Aug. 28, 1890.

Classification of Honey-Plants.

I would like to know the botanical classification of the following honey-plants: 1. Rocky-Mountain bee-plant. 2. Simpson honey-plant. 3. Chapman honey-plant. I wish to see if they are not natives of this latitude. DR. WM. B. CARPENTER.
Leavenworth, Kans.

[1. Rocky-Mountain bee-plant (*Cleome Integrifolia*) is a near relative of the spider-plant. 2. Simpson honey-plant or figwort (*Scrofularia Nodosa*) is variously known as square-stalk, heal-all, Carpenter's-square, rattle-weed, etc., the name indicating some of its peculiarities, or real or supposed valuable medical properties. 3. Chapman honey-plant (*Echinops Sphærocephalus*) was introduced in 1886 by the late Mr. H. Chapman, of Versailles, N. Y.—ED.]

Gathering Some Honey.

My bees have done far better than the reports I hear from many other bee-keepers. I have 44 colonies, and I did not have to feed them anything during the whole summer, but they seem to have their hives well filled, and have gathered about 700 pounds of surplus honey. When the weather permits them to be out, they seem to be very busy gathering honey.
I. G. OLSSON.
St. Paul, Minn., Aug. 23, 1890.

Results of the Season so Far.

I commenced last spring with 2 strong colonies of bees, and have increased them to 9. They have now about 30 pounds each of good honey to winter on. I got about 25 pounds of surplus honey, mostly extracted, for which I received 10 cents a pound; for comb honey 15 cents. I clipped the queen's wings, which I think is a good way, as we then will have no runaway swarms. The honey crop is very light here. Basswood did not yield much, and white clover very little. R. M. TOLEBROTEN.
Barber, Wis., Sept. 5, 1890.

Honey from Fall Flowers.

I send you a sample of honey taken on Aug. 11; it granulated in one week after extracting. I am at a loss to know just from what source it came, as wild cucumber, blue vervain, sensitive-plant (called by some "partridge-pea") were in bloom at the time it was gathered.
W. H. MARTIN.
Elkhorn, Nebr., Aug. 26, 1890.

[The sample of honey was received during our absence. It is light amber in color, and of decidedly mild and pleasant flavor. It is doubtless a mixture of various fall flowers, no particular flavor predominating.—ED.]

Qualities of the Carniolans.

As many are praising the Carniolan race of bees, I want to give both sides, so that should any one try this race of bees they will know what to expect.

Good qualities: The pure stock is quite gentle, good comb-builders, non-robbers, quiet in winter, build up early, and swarm early; are good honey-gatherers, enter surplus cases readily, cap their comb white, use little propolis, stay where you put them well in forming nuclei; cling to the combs well, but are easily shaken off; and are the best defenders of their homes I ever saw. The queens are very prolific, and the colonies are always ready for a honey-flow. My best colony stored 72 one-pound sections, and built 16 Heddon frames of comb from starters ½-inch wide. The best Italian colony stored 90 pounds of extracted honey, but built no combs.

Bad qualities: The queens continue to lay through the dry season, using up surplus honey; young queens will fill all drone-combs with drones, and them not six weeks old; they rear lots of brood all through the season, and swarm late. A colony will generally swarm six weeks after the first swarm in spring, although I have had Italians do so this year. The mismated stock are worse about swarming than the pure stock. Mismated Carniolans are easier to handle than hybrid Italians, but are not as good workers. All swarms were hived on empty frames with starters ½-inch wide. I think that we will be able to overcome the swarming of the Carniolans, and then what bees we will have!
Unionville, Mo. E. F. QUIGLEY.

Good Honey Crop.

The honey season is about closed here, and a large amount of honey has been gathered. The quality is good. The average has been about 100 pounds per colony, spring count. We have had no foul brood in this section yet, and I hope that we will not have any. The bees will go into winter quarters in good condition.
H. E. ENGLISH.
Greeley, Colo., Sept. 5, 1890.

Mountain Mint or Basil.

Please give the botanical name of the enclosed plant. It is one of the best honey-plants to be found in this section of the country. G. B. REPLOGLE.
Centerville, Iowa, Aug. 28, 1890.

By request, Prof. Clarence M. Weed replies to the above as follows:

The plant is a mountain mint, sometimes called "basil"—a species of *Pycnanthemum*, and, so far as can be judged, without a more perfect specimen, it is *P. incanum*.—CLARENCE M. WEED.

Progress in Apiculture.

There is no subject that is of more general interest to the bee-keeper than the educational facilities that we have at hand in the AMERICAN BEE JOURNAL. This is an age of advancement, and when one improvement in bee-culture follows another in such rapid succession, so that even the newspaper men have to stay up nights to keep up with the times—then it is that we realize and appreciate the fact that we are living in the Nineteenth Century, and in a very practical age—an age of wonderful achievements. This life seems short, at best, and it is plain to be seen that our substantial bee-men and women are taking a very practical view of the situation by keeping up with the spirit of progress.
Buffalo, N. Y. J. W. TEFFT.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just the right size for the pocket. Every school boy and school girl, as well as everybody else, should own and use it. Price, **25 cents.**

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

CHICAGO, Sept. 10.—Honey has sold well of late, despite the higher range of prices—17@18c being the value of white comb in 1-pound sections, and sells upon arrival; the weather being cool, a brisk trade is now being experienced. Extracted also sells quickly at 7@8c in barrels and cases. Supply fair.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Sept. 5.—Demand for comb honey continues good, but supply light. We quote: White 1-lbs., 15@16c.; 2-lbs., 13@14c. Dark 1-lbs., 13@14c.; 2-lbs., 12@13c. White extracted, 7c.; dark, 5@6c. Beeswax, No.1, 25c
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Sept. 10.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6¼@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 11.—Demand for comb honey is larger than the receipts. We quote: White 1-lbs., 16c.; 2-lbs., 14c. Dark 1-lbs. 13c.; 2-lbs., 12c. Extracted, white, 7c.; dark, 5@6c. No beeswax on the market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 10.—Comb honey is selling at 14@16c; very little in the market. Extracted, 7@8c. Beeswax, 26c for good.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, Sept. 8.—Honey of all kinds is scarce. There is almost no comb honey in this city. But what is of greater importance is, that we have hardly enough extracted honey to supply our manufacturing customers. The "hold-on" doctrine is bad policy, as we are sure to be overstocked again about Christmas time. Such has been the case generally, and is likely to repeat itself in a great country like ours. Choice comb honey would bring 15@16c. Extracted brings 5@8c. Beeswax is in good demand at 24@26c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

◆

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send.

◆

Trial Subscribers.—In order to get as many as possible to read the AMERICAN BEE JOURNAL, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

◆

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for a year with the above for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications.

◆

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Advertisements.

SITUATION OFFERED—To a competent wood-worker, who thoroughly understands the manufacture of BEE-HIVES, SECTIONS, etc. Address, with references, W. H. PUTNAM, River Falls, Wis
38Atf
Mention the American Bee Journal.

Send 25c For my Book of Discovery and Invention, **The Queen Restrictor**
Address,
C. W. DAYTON, - Clinton, Wis.
38A1t
Mention the American Bee Journal.

Prices Reduced.

SELECT TESTED QUEENS, $1.25. Warranted Queens, 75 cents—6 for $4.00. Make Money Orders payable at Nicholasville, Ky.
14Etf J. T. WILSON, Little Hickman, Ky.
Mention the American Bee Journal.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,
34Atf **J. A. KING, Mankato, Minn.**

Eighth ∗ Edition ∗ Just ∗ Published

New and Revised Edition
—OF—
BEES AND HONEY,
OR THE
Management of the Apiary
FOR PLEASURE AND PROFIT
—BY—
THOMAS G. NEWMAN,
Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

LIBERAL DISCOUNT to dealers, by the dozen or hundred.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

☞ This new edition of our BEES AND HONEY will be given as a Premium for only **three new subscribers,** with $3.00; or clubbed with this JOURNAL for $1.75.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 **cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills
Mention the American Bee Journal.

Extra Thin Comb Foundation.

In 25-Pound Boxes.

WE CAN now furnish the **Van Deusen** EXTRA-THIN Flat-Bottom FOUNDATION put up in 25-lb. Boxes, in sheets 16½x28 inches, at **$13.75** per box. **12 ft.** to the lb.

☞ The above is a **special offer,** and is a **Bargain** to all who can use that quantity.

All orders for any other quantity than exactly 25 lbs. (or its multiple) will be filled at the regular price—**65 cents** per lb.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to

CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers.
Mention the American Bee Journal.

BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

CHOICE HONEY

FOR SALE

CHEAP

Address,

JAMES HEDDON, Dowagiac, Mich.
37A2t

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Italian Queens by Return Mail

Tested, $1.00 each.
Untested, 60 cts. each, or four for $2.00.

34Atf **GOOD BROS.,** NAPPANEE, IND.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine Eating, Drinking, Cooking, for making Cosmetics Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time. Address,

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

I HAVE COME

To say to the readers of the BEE JOURNAL that you can get **Italian Bees and Queens** from the

KNICKERBOCKER BEE-FARM,

By **Return Mail or Express,** at the following prices:

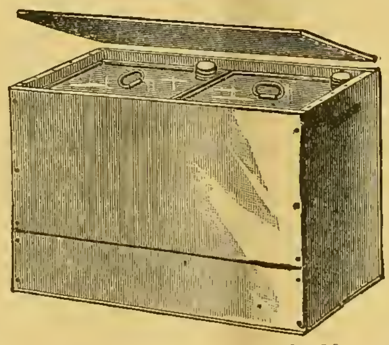
	Each.	Per ½ doz.	Per doz.
Virgin Queens	$ .40	$2.00	$ 3.50
Untested Queens	1.00	5.00	9.00
Tested Queens	1.50	7.00	13.00

One-pound of Bees, $1.00; 5 lbs. or more, 75c per pound. Two-frame Nucleus, $2.00. **Special Rates** on large orders. Circular and Calendar free. Address,

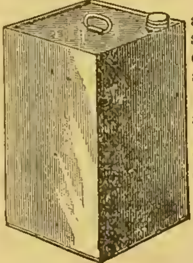
G. H. KNICKERBOCKER, Pine Plains, N. Y.

30Etf WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1	Single Can	(boxed)	$ .45
12	" Cans	"	5.00
100	" "	"	40.00
1	box of two Cans		.75
12	boxes "		8.40
100	" "		65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Choicest Italian QUEENS!

Purely BRED — **Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. NONE BETTER IN AMERICA! Send for Price-List. Order **early.**

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf

SHIPPING CRATES!

WE MAKE THEM NEAT AND CHEAP.
WRITE FOR PRICES.

G. B. LEWIS & CO.
35Atf **Watertown, Wis.**

Mention the American Bee Journal.

BEES AND HONEY

The Dovetailed **Strongest, Best and Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25 ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

Mention the American Bee Journal.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

LOOK HERE!

TESTED Italian Queens, $1.00 each; Untested, 75c.; 12-pound Shipping Cases in flat, per 100, $6.00; 2x9 glass for same, per 100, 70c.; per 500, $3.00. Price-List free.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

Mention the American Bee Journal.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Sept. 27, 1890. No. 39.

Fall Flowers have been blooming nicely, but the weather has been too cool for the bees to gather much honey from them. The crop is short—very short—not only of white honey, but of the darker, from fall flowers. Prices should be good.

Mr. L. G. Reed, at Kent, O., while we were there last month, called our attention to the best honey-producer that was then blooming in his vicinity. He procured a large branch for us, and desired to have its name mentioned in the AMERICAN BEE JOURNAL. It is one of the balsam family—the *impatiens Noli-me-tangere.* It is also called "touch-me-not," because to squeeze it, even gently, causes the "pod" to collapse. It produces both pollen and honey.

The Rev. L. L. Langstroth is improving in health, as will be seen by the following quoted from a letter just received from his daughter, Mrs. Anna L. Cowan, dated at 928 Steele avenue, Dayton, Ohio :

> MR. THOMAS G. NEWMAN—*Dear Friend:*—You will, I am sure, be glad to hear of the improvement in my father's health. He is yet very far from being well, but "the dark cloud" of sorrow and disease is much lightened : and I am not without hope that it may soon pass away, leaving him once more bright and happy, and able to enjoy life.

We know that our readers will be very glad to learn that our esteemed friend Langstroth has even partially recovered from his malady, which has for such a long time had almost complete mastery over him. Of course there have been a few seasons when he has, for a short time, at least, had some little relief from the disease. We hope now that the "head trouble" will return again no more.

This news about Father Langstroth will be most welcome to all our readers.

How Strange it is that those who copy articles from other papers cannot do so without perverting them. On page 471 we published an essay by Mr. H. F. Moore, which was read before the Ohio State Convention. Mr. Moore took strong grounds against the repetition of the Wiley lie, about the manufacture of comb honey, and said : "No greater curse to the bee-keepers of our land can be imagined than the much-written-about Wiley lie." He clearly showed that it was a myth, and that it was a great curse for local papers to copy items about it, and thus give some color to the Wiley lie.

Now comes the Orange Judd *Farmer* of last week, and on page 162 it copied Mr. Moore's essay, and inserted sub-headings in *full-face* type, one of which reads : "Manufactured Honey is on the Market." This is in direct opposition to the tenor of the article, and the views of the writer ! To make it still more offensive, the *Farmer* changes one of Mr. Moore's sentences to this : "To be plain, the general public is perfectly aware that lots of manufactured honey is on the market."

The sentence is garbled ! Mr. Moore did not use the words "perfectly aware" at all ! The rest of the sentence was used simply to state the fallacy of the blind belief of the general public, and to show how they "hedged" when asked for proof, and admit that it was *their guess*, or a current report, *instead* of being based upon their knowledge.

The Orange Judd *Farmer* will, no doubt, be glad to make the correction as soon as Mr. Judd sees this item.

Mr. A. C. Tyrrel, of Madison, Nebr., asks us to say in the BEE JOURNAL "what amount is to be paid, and what steps are necessary to be taken to procure medals awarded at the Paris Exposition." We are sorry to say that we know nothing more on the subject than is found on page 212 of the BEE JOURNAL. This we do know, that medals awarded in Europe are very seldom obtained by those to whom they are awarded. We were awarded one eleven years ago in Austria, but have not yet received it. The Department of Agriculture may be able to give some information on the Paris awards.

Dr. A. B. Mason judged the "farmers' products" at the Ohio State Fair last week, including the honey exhibit. As the Toledo Exposition was held at the same time as the Michigan State Fair, he was obliged to decline to serve at the latter, though he had served as judge for it for five years.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 655 of this paper.

Wide Frames.—Mr. F. D. Lacy desires to call attention to the following correction of an error in his article, which appeared on page 634 of last week :

> In my communication in the AMERICAN BEE JOURNAL, on page 634, by mistake it reads that "I placed in the upper (of a certain hive referred to) seven brood-frames." It should read *seven broad frames*, and I should have added, "each containing eight section-boxes."
>
> The public would think that I very much exaggerate, to say that I took 70 pounds of comb honey from seven *brood*-frames, and regard me as not a very excellent bee-keeper to do it in that way. Why I more particularly refer to it is, to gently cite all bee-keepers who are accustomed to the use of section-boxes without division-boards to the inconvenience of having the comb built out even with the edge of the section-box, and beyond, and the annoyance of handling honey in that way.

The slight difference between *o* and *a* in writing is responsible for the printer's error. Had they been called *wide frames*, as usual, the error would not have occurred.

The Fair at Racine, Wis., was a success. Mr. F. A. Gibson had an excellent exhibit, and was awarded 16 first premiums on honey, fruit, vegetables, etc. The Racine *Times* remarks as follows about his exhibit :

> F. A. Gibson has the finest exhibit in the fruit and vegetable department ever seen in the main building. He has a fine display of extracted and comb honey, also a hive of bees on exhibition. He has been granted the right to sell his stock during the Fair.

Do Not Sell Honey at too low a figure, for it is a scarce article, and should bring a good price. But we must add : Do not hold the comb honey too long, but sell at the right time, when the prices are at the top. Comb honey should not be sold at retail for less than 25 cents per pound, and extracted honey should retail at not less than 15 cents per pound. Honey is well worth these prices.

The Fair at Lansing, Mich., was a very successful one. So writes Mr. H. D. Cutting, who knows what he is talking about. He adds : "I go to our County Fair, then I have done for this year." The hard work done at several Fairs for this season will make the coming rest welcome, for friend Cutting is a *worker.*

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free.*

Feeding the Bees, if it is necessary, should be done during the coming three or four weeks. Give it to them as fast as they will take care of it.

September and the Bees.

BY W. P. DOLE.

Shorn harvest-fields lie warm beneath the glow
Of cloudless light that holds the charmed trees
In dreamy trance ; an idle, vagrant breeze
Just kisses the calm river's face below,
Nor tempts this upland air—seeming to know
How Nature here at length doth take her ease,
Where, of the hive forgetful, drowsy bees
From lingering clover-blooms fly droning slow
On lazy wings, deep in soft couch to hide
Of regal golden-rod. My aimless feet
Rouse silent grasshoppers, which start aside,
As wary skirmishers a space retreat ;
Nor beast nor bird, with sound of strife or mirth,
Breaks the sweet spell that rests on all the earth.

St. John, N. B. —Selected.

Judge W. H. Andrews, of McKinney, Texas, died on Aug. 6, 1890, of paralysis. He was an experienced bee-keeper and an interesting writer, and in his death the apiarists of Texas have sustained a great loss.

We Regret to learn that Jacob T. Timpe, of Grand Ledge, Mich., has been laid up with the typhoid fever, malaria and *La Grippe*. This will explain the delay in filling orders.

Moth-Worms and Comb Honey.—Mr. J. C. Bechtold, Bippus, Ind., asks the following question to be answered in the BEE JOURNAL :

> How must I put up honey (such as in brood-frames and brood-combs) for spring feeding, to keep moths or worms out of them ? I was very much bothered last spring with worms in my frames of honey.

We are not sure that we catch the idea Mr. B. wishes to convey. If the combs of honey are taken out of the hive in the fall and put away "for spring feeding," there will be no danger of the ravages of the moth, for the worms cannot develop without warm weather. It is true that they will live a long time in a dormant state, if not killed by a freezing temperature of 15 or 20 degrees, Fahr.

If the combs of honey are removed in the spring or summer, to be kept over until the following spring for feeding purposes, they should be hung up, two or more inches apart, in a room, and thoroughly fumigated with sulphur, and this should be repeated as often as necessary.

Preparing Bees for Winter.—Mr. Thos. A. Anderson, of Gamma, Mo., writes thus in reference to this subject :

> In the second paragraph of the article by Prof. Max Brose, on page 612, is a statement which, aside from the rest of the article, is very misleading, viz : "At least 4 frames should be covered with young bees, and 35 pounds of sealed honey." It is impossible to confine bees to 4 frames and have 35 pounds of honey. As I was mislead in my earlier experience by similar statements, I call attention to this. No greater mistake can be made in preparing bees for winter, than to allow more space than the cluster will cover.

Orange-Blossom Honey—Melissa, etc.—Mr. W. M. Crutcher, of Zellwood, Fla., writes thus about "orange-blossom honey :"

> I saw on page 580 of the BEE JOURNAL, an item taken from the *Rural Californian*, headed "Orange-Blossom Honey." Now I do not deny that there may be many vile compounds sold by grocers for orange-blossom honey, but it is a mistake to say that there is "no such thing as orange-blossom honey." If you were here when the orange-trees were in bloom, and could see the bees swarming on them, and then taste the honey, you would be convinced that what I say is true about it.
>
> The *Rural Californian* forgets that there is another State in America that produces orange-blossom honey, and it is strictly *pure*, too.
>
> The *Rural Californian* may be correct as far as California is concerned, but the orange-blossom honey in this part of Florida (Orange county) is as *pure* as you can get it. There is no other honey-plant in bloom here before or at the time the orange-trees are, so the honey must be pure.
>
> The next honey we get is palmetto ; it is not as fine as orange-blossom honey, and is darker. I know of no other of any value for surplus honey. Cow-peas produce enough for bees to live on. A neighbor bee-keeper sent some orange blossom honey to Mr. A. I. Root, to sample, and he reported that it was equal to clover honey.
>
> I think that Florida is a good place for bee-keepers ; there is no bother about wintering the bees, for it is never cold enough to take them in. I think that 5 or 6 cents a pound for honey is giving it away. The people of Florida have had a sore lesson by shipping their oranges to commission merchants. If the bee-keepers had some other way to dispose of their honey, I think that they would get better prices.
>
> What time of the year and how should we plant melissa ?
>
> We had a very poor season this year for honey, as the drouth last spring ruined the honey crop in this section.
>
> What time do you put the second story on the hive for surplus honey ?

The remarks about obtaining orange-blossom honey, unmixed with nectar from some other flowers, was based upon the California product and climate, and evidently Florida was not thought of in that connection. We are glad to learn that Florida can give us the pure, unmixed orange-blossom honey.

Perhaps Mr. A. C. Tyrrel, of Madison, Nebr., will tell us when and how to plant melissa.

When the hives are full of worker bees, and the honey-flow is abundant, is the time to put on supers.

The International American Bee-Association will meet in Keokuk, Iowa, Oct. 29, 30, and 31. Parties desiring to attend will please write to the Secretary for copies of the programme and for railroad and hotel rates. As this is the first meeting west of the Mississippi, in the twenty years of the existence of the Association, a large attendance is expected, especially as our leading publishers and a number of bee-keepers of note will be there. All communications should be addressed to C. P. Dadant, Hamilton, Ills.

Use a Veil.—Mr. W. M. Barnum very sensibly remarks thus in the last issue of the *Farmers' Magazine*, under this heading : "Don't be Afraid to Wear a Veil :"

> As the Irishman said, "A man can get used to 'most anything, if it only lasts long enough." With a bee keeper, stinging generally lasts long enough so that he "gets used to it." It is so in my case. Bee-stings cause me very little pain, and generally no inconvenience, except when I get a stray "jab" in or near the eye. I need my eye-sight as much as my wits, and hence I believe in being "green" enough to wear a veil when circumstances require one.

It is well while at work among the bees to have a bee-veil handy. We have found this to be a good rule to follow, and the best "bee-veil," by-the-way, is "the Globe," manufactured by Thomas G. Newman & Son, Chicago. We have used this Veil for years, and have found it to answer the purpose the best of any. All timid or nervous persons should invariably wear one. Good eyes are too scarce to wantonly neglect, in any way.

A B C of Strawberry Culture is the name of a neat pamphlet of 150 pages, by Messrs. T. B. Terry and A. I. Root. It covers the whole subject in an interesting manner, is nicely illustrated, and is just the work for those beginning to grow delicious strawberries. Price, postpaid, 40 cents. For sale at this office.

Congress ought to abolish Postal Notes, and authorize the issuance of Paper Fractional Currency. It is much needed to safely carry on the business of the country done through the mails.

The Inter State Hay Palace will be held at Momence, Ills., Oct. 1 to 11, 1890. Forty-two dollars are offered as premiums on bees and honey.

Dr. A. B. Mason, of Auburndale, O., wrote us as follows, a few days ago :

> The HOME JOURNAL is so bright, clean in make-up, and tone of its contents, that I wish every home in the land could be visited and blessed by it every month, and it is now so *very* cheap in price that "everybody ought to subscribe. Mrs. M. and the "baby" try to see which shall have the first look at it when brought from the post-office, and it generally terminates in a "draw game," both sitting down together and taking a good look at its contents.
>
> The Globe Bee-Veil is just "a dandy." The first few times I used it I did not just like it, but now that I have got the "hang of it," I like it. I can sit out-of doors now, in the shade, and read and bid defiance to the "pesky flies," and if (by chance) I fall asleep they cannot disturb my "sweet slumbers" and dreams by "waltzing" around on my face.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

The Agricultural Experiment Station of the University of Illinois was established in the spring of 1888 under an act of Congress providing for the establishment of such stations in the several States and Territories, and appropriating $15,000 per annum to the support of each. The purposes of the stations are thus prescribed in the act:

> That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

The act provides further:

> That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to......such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports of said stations shall be transmitted in the mails free of charge for postage.

Bulletin No. 10, "Investigations of Milk Tests," and Bulletin No. 11, "Experiments with Wheat," have been recently issued by this Station in compliance with the law, and these and bulletins hereafter published will be sent, free of all charges, to all persons in the State actually engaged in farming, who will address a request for them to the "Experiment Station, Champaign, Illinois."

◆

Nature's Original Package of honey in the comb is thus described by Mr. L. H. Wilcox, of Hastings, Minn., in the *Farm, Stock and Home*, an excellent farm paper published at Minneapolis:

> In these degenerate days of glucose syrup, poisonous vinegar and other adulterated foods, there is added luxury to the delicious cake of comb honey when we consider that here at least we are getting our food from "Nature's original package," undefiled by the arts and sciences as applied to modern business methods.

◆

Are you Going to the Fair? If so, will you kindly send to this office and get a few samples of the Bee Journal, and give them out to your friends there, and get up a club? We will send them to you with pleasure.

QUERIES and REPLIES.

Management when Two Queens are in a Hive.

Written for the American Bee Journal

Query 731.—1. When two or more swarms are hived together, what plan is most generally adopted by bee-keepers to destroy the surplus queen, as hybrid queens are difficult to find? 2. Supposing two queens should enter the hive, what would be the result? Would a part swarm again, or would one queen kill the other?—Ontario.

1. I find and kill her. I do not find it difficult to find hybrid queens. 2. One queen would be killed.—A. B. Mason.

1. I do not know what plan is generally adopted. 2. Either one queen will kill the other, or the bees will destroy one.—M. Mahin.

1. You will generally find the queens balled, and can find out which queen you want to destroy. 2. No—the bees or one queen will kill the other.—P. L. Viallon.

1. I always find the queen and kill her. 2. One would usually be killed. Rarely both live peaceably together. They would not swarm.—A. J. Cook.

1. The bees are generally allowed to take care of the queens. 3. Generally one queen would be killed, but occasionally neither will be killed, and a swarm will issue with one.—R. L. Taylor.

They generally allow the bees to destroy the extra queen unless one of the queens is much better than the other. When two queens enter one hive, one of them is generally killed by the bees.—Dadant & Son.

1. I think the plan most generally adopted is to hive *one* swarm "together." If I cared anything for my queens, I should hive the swarms singly. If not, I would let them fight it out when obliged to do differently. 2. One queen will kill the other.—Eugene Secor.

1. I think they usually let the bees attend to it. All hybrid queens are not difficult to find. 2. Probably neither. The bees would be likely to kill one of the queens. If one or both of the queens were virgins, then one queen might kill the other.—C. C. Miller.

1. I destroy the poorer queen in such case, unless I have use for her in some other colony. 2. With two strange queens hived together, the result would usually be that one of them would be destroyed by the other, the weaker "going to the wall."—J. E. Pond.

1. The plan usually adopted by bee-keepers is to let the queens fight it out. 2. Usually one will be balled, and soon killed by the bees—if not so destroyed, one queen will swarm out in a day or two, taking all the bees with her, and the other queen, too.—C. H. Dibbern.

1. The queens can almost always be found by the bees balling them. Pick out the queens from the balls of bees—save and cage the best one, and introduce in order to run no risk of her being killed. 2. Sometimes they swarm out; and often one queen may kill the other. I have known the bees to ball both queens to death.—J. P. H. Brown.

1. Look over your bees as they run into the hive, and pick out the queen you wish to destroy, or else take your chances. 2. One of the queens would kill the other after a few hours, unless some of the bees did it for them. It would not be apt to result in a division of the bees—a part swarming out.—James Heddon.

1. Let the bees take care of that matter, unless you have a choice as to which queen lives. If so, hunt out the poor one and kill her. 2. One queen would kill the other. Get a book on bee-keeping, and post up. In these days of cheap literature, no one should be ignorant of the first principles of apiculture.—G. M. Doolittle.

1. I cannot tell. In our own apiary, when we hive "two or more" swarms, if we see an extra queen we catch and cage it; if an inferior one, we take her head off. 2. Sometimes one is killed either by her rival, or by bees of the other swarm, in which case they unite; otherwise they all swarm out again, and each swarm will cluster with their queen.—Mrs. L. Harrison.

1. Spread a good-sized piece of old rag-carpet on the ground, and throw the swarm upon it when the queens can all be found. 2. Both queens would be balled, and one of them be finally killed by the bees. I think that the queens rarely get together. Should one of the queens escape from the hive, her own bees are sure to find her and swarm out.—G. L. Tinker.

1. If there is no choice in the queens, let the bees settle the matter. If there is, find the poorest one and kill her. 2. Then one queen would be killed.—The Editor.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. Rice, Sec.

☞ The annual meeting of the Union Bee-Keepers' Association, will be held at Hamilton, Ills., on Oct. 10 and 11, 1890. A good time is anticipated.
Daniel Shank, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. Seeley, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. Barnes, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. Fehr, Sec.

◆

The Florida Sub-Tropical Exposition will open about the second week in January, and will continue for a season of 12 to 15 weeks. The Exposition makes a special feature of tropical and semi-tropical fruits and flowers, and all products of Florida. The display this season promises to be an exceedingly valuable one. Full particulars may be obtained of S. A. Adams, Secretary, Jacksonville, Florida.

◆

A Portrait of Speaker Reed, and a full-page picture of the Ways and Means Committee of the House of Representatives, which formulated the McKinley Tariff Bill, are included amongst the illustrations accompanying an interesting and spicy article on "The House of Representatives," by Frederick S. Daniel, in the October number of "Frank Leslie's Popular Monthly."

BIOGRAPHICAL.

JAN SWAMMERDAM.

The following biographical sketch of the noted Holland anatomist and discoverer of queen-bee maternity, was translated from the *Deutsche Illustrierte Bienenzeitung*, by Rev. Stephen Roese, of Maiden Rock, Wis., for the AMERICAN BEE JOURNAL :

On perusing the history of apiculture of ancient date, we meet, 400 years before Christ, the great philosopher Aristotle, who made the honey-bee a special object of his studies, and facts discovered by him have not been fully realized until the present century ; and the many writers who treated on apiculture after him, were chiefly poets, such as Virgil, and economists like Columella, Paladius, etc.

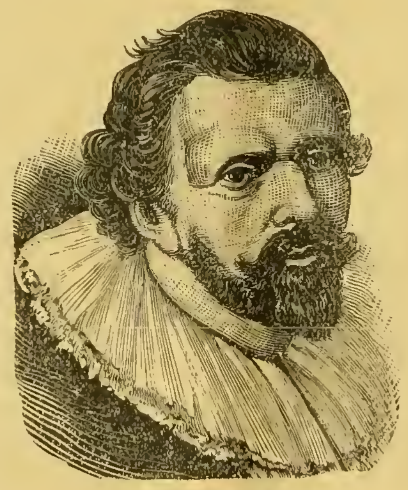
The middle age of the world added nothing new to the cause, for in convents and universities the classical writings were studied and explained chiefly, but more in the letter than in the spirit. At the close of the Middle Age, it could truly be said that since the days of Aristotle, the knowledge of apiculture had not been advanced in the least. This assertion may seem strange to some, but it is nevertheless an undeniable fact.

In the 10th century appeared a number of works on apiculture, but they contained nothing new concerning the nature of the honey-bee ; but in the century following, a man appeared on the stage of action, whose deep, searching mind gave to the world the first lessons relative to the nature and species of the honey-bee, and this man's name was Jan Swammerdam—a Hollander, born in 1637, in Amsterdam, who shared the same fate, like many great discoverers before and after him—like Columbus, Harvey and Hahnemann—during his life-time his service and great discoveries were not appreciated, and the difficulties he had to encounter were so great, that his latter end might well be called a miserable one ; the after-world reaping the benefit of his labor and toil, and ungrateful like in all other cases, his person and real worth were soon forgotten, and even the bee-keeping fraternity, for whom he had done so much, did not pay due respect to his memory according to his real worth, although he did not devote his whole life-time to apiculture like Francis Huber, later ; but what he did do, is so praiseworthy that he justly deserves the title as the first and greatest discoverer in apiculture of all past ages.

And who was this man ? and what did he do for this honest industry and art ? These are two questions of great importance, the answers to which are given in brief as follows :

Jan Swammerdam was born in the year 1637, in a naturalist's cabinet, which fact prepared the way for his future calling. His father was a chemist and naturalist, who gathered with unceasing effort everything that sailing vessels brought from both Indias, in curious animals, plants, minerals, and all specialities which could be found in Europe, and in this chaos of nature's wonders and rarities, Swammerdam spent the days of his youth, and received his early impressions and first love for research and knowledge of nature.

Young Swammerdam resided in the heart of Amsterdam—the Babylon of commercial centre in Holland, like Robinson on his island, to devote his whole lifetime to the study of nature and its hidden wonders, and he soon started out on his journey through the Netherlands, for search and gathering of insects.



Jan Swammerdam.

His father being a devout naturalist, and gatherer of insects, yet he did not approve of his son spending his lifetime in the study and gathering of the same, for it was his wish that he should study medicine, for which purpose he sent him to the University at Leyden. The practice and knowledge of medicine in those days was very limited, and the untiring spirit of the young Hollander resolved to dig through the surface of medical knowledge to its very foundation, and his motto was, How can we heal the sick if we have no knowledge of the healthy ? and if we once know the organism of man, who stands on the upper round of the ladder in the animal kingdom, is it not important to know and understand the organism of the animal and insect creation below ? and with this object in view, young Swammerdam was led step by step to the most fruitful discoveries of all ages.

In the year 1610 Galileo had received a magnifying glass, with which he constructed a telescope ; this instrument he turned upward and saw in the sky, planets far and near. Swammerdam took the glass and turned it downward, and saw the world and its wonders, as no man ever did before ; until then, learned men and philosophers had depended more upon their own senses, but now, by the aid of this mighty and powerful instrument, the learned perceived that they had not only seen the most hidden wonders of the world, but had greatly labored under mistaken ideas. It can therefore justly be said that Swammerdam was the first man who constructed the first practical microscopic instrument.

Swammerdam was then young, and a simple student of the University at Leyden, when he discovered the higher and lower order of living beings. He was the first man who discovered the maternity of the female and insects, and understandingly explained the same without entering upon the first subject (the female), which does not belong here, but is fully given and explained in his work, *Miraculum naturæ sea uteri umliebris fabrica* (Leyden 1672) ; but in the latter (insect) case it is important to remark, and of interest, that after carefully dissecting, he proved that the (then called) "bee-king" was a female, and the mother of the whole colony in the hive, and the drone the male bee. This proved a great advance step in apiculture, which astonished the world, and is alone enough to immortalize the name of Swammerdam throughout all ages.

Swammerdam did not stand still at this discovery, but dissected each and all species of bees, and obtained the most microscopical discoveries.

Swammerdam was at this time not perfect, but adhered to several gross errors for some time, which could not be expected otherwise. He advocated, for instance, three different kinds of eggs—queen, worker and drone ; and he further believed in a sad spending of the drone to fertilize the queen. He practiced artificial swarming and artificial queen-rearing. In the month of April he would take the queen with a quantity of worker-bees, and transfer them to another hive where the new colony soon began to build new combs, and as soon as a new queen had been reared in the parent hive, he took her away again and did as before, and as a result, a favorable season would produce from 10 to 15 nucleus colonies.

Swammerdam did not only study the life of the honey-bee, but also that of other insects, and likewise he declared the maternity of the ant.

These were great discoveries which revealed to man the great secret of higher insect life, and initiated mankind into the motherly character of their societies, which support no monarchical government, but motherly republics, and immense public cradles, from which each colony in due time sends forth a new nation. But how did Swammerdam make known to the world his great discoveries? This proved a precipice on which his life and being was dashed to pieces.

Young, and without academic diploma nor friends, he lived secluded in his cabinet of study, not only during his times of study, but also later; he was destitute of means to publish his great works of discoveries. The professors of the University at Leyden were against him, and laughed at the idea of a novice and simple student making such discoveries, which had thus far baffled the skill of his superiors, and they scorned the idea of him arising on a level with them, or rather above them.

His father left him in a critical condition, and without any means, and had it not been for the sympathy of his friends he would have been unable to carry his great work to perfection.

Swammerdam at last resolved to go to Paris to demonstrate and make known his discoveries, and in the midst of a society of learned naturalists, whom the great traveler, Thevenot, a Frenchman, had called together at Issy. At this time the Grand Duke of Toscona called him to Florence, but the misfortune of Galileo prevented his journey into Italy, however; in France was no safety for him, for the Mistiker Morin was burned alive at Paris that year—1664.

At the age of 32, through over-exertion and sorrow, he fell into occasional fits of melancholy, which hastened him to any early grave. His eyesight failed in 1667, while he prepared a manuscript on metamorphose of insect life for publication. This work alone should have immortalized him to the after world, but it hurried him into the great danger of starvation. His father denied him all aid and help, and received him not even in his home. A wealthy friend had formerly urged him to come and share a home with him, but when Swammerdam reminded him of this, the friend had no recollections of such an offer. Misfortune after misfortune befell him, poor and sick he wandered in the streets of Amsterdam, not even knowing where to deposit his documents of research and discoveries for safety, to say nothing of a roof to shelter him; and the last and greatest misfortune befell him—the ruin of his country, even the ground under his feet was to give away from under him.

It was the year of 1672, when Holland fell a prey to the French invasion by Louis XIV. This country had thus far no blessing in store for Swammerdam, but it was the birth-place of a natural philiosopher and great discoverer, and common sense and an asylum of deep thinking, and now his country is first swallowed up by French invasion, and next by water.

It seems that Swammerdam could live no longer in this world, and at the age of 36 he began to hasten to his end, when one day, perchance, a book fell into his hand, seemingly written by a woman's hand, and the tender words went to his heart, comforting him to some extent. This work was written by Lady Barigno, poor and needy as Swammerdam was, and he resolved at once to undertake a pilgrimage to Holstein, in Germany, where this lady resided; after he had seen the mysterious woman, he felt somewhat consoled, and resolved to quit his labors.

He would gladly have led the life of a hermit, to live henceforth for God only, and he resolved to sell his cabinet, his life-long work of research and discoveries, but could find no purchaser in Holland nor France. Now sick and disgusted with all mankind, he retired to a secluded spot in 1680, and never went out; for five years he lived in destitution and want, and in a melancholy fit ordered all his valuable manuscripts burned, and, at the age of 43, Death, as a welcome guest, came at last for his deliverance.

What was the cause of this great man's early death? Deep searching for knowledge, and the sudden revelation of the mysteries of nature befell him unawares with amazement, and when others on his pathway advanced, ascribing to insects a heart and soul, Swammerdam became stunned and frightened, and began to stand still and doubt, and felt that the knowledge which had led him into the channel of discovery, would lead him to something extraordinarily great, which he did not desire to see, and he should not see it, for his eyes were already blinded with the dazzling brilliancy of the era of perfection in apiculture.

But the treasury of this profound thinker and great discoverer was made known many years after his decease (in 1737), though the publishing of his work entitled "the Bible of Nature," in which we see Swammerdam in the light of his glory, with which science and art has endowed a true scholar worthy of praise.

CORRESPONDENCE.

CONVENTIONS.

Suggestions as to the Place of Meeting for the International.

Written for the American Bee Journal

BY ERNEST R. ROOT.

At the Bee-Keepers' Convention at Plum Bay, N. Y., we had a pleasant time. The entire shores of the most beautiful Lake George were covered with historic reminiscences. Mountains rise abruptly out of the water, and the scenery round about is indescribably beautiful. The water is clear—so clear indeed, that objects can be seen sometimes 40 feet beneath the surface. At the point (Plum Bay) where the bee-keepers camped, there is said to be a man-of-war sunk. It lies in a depth of 40 feet of water, and yet I am assured that, on favorable days, its hulk can be quite distinctly seen.

At one end of the lake is Fort William Henry Hotel, on the spot of the old fort of that name, and, at the other end, Ticonderoga. Near by are two or three celebrated battlefields.

I have taken pains to mention some of the natural attractions of Lake George, and now then, to my point:

Two first-class bee-keepers, Messrs. Andrews and Lockhart, own several cottages and a considerable portion of the shore bordering on the southeast. They are very anxious that this camp of bee-keepers should be an annual affair. As it is situated between the New England bee-keepers and the New York State bee-keepers, and is easy of access to some of the most extensive bee-men in the world.

Still further, while we were in camp this time, we were discussing as to whether this might not be a very desirable location for the International Bee-Association, to be held the year after the meeting at Keokuk, Iowa, namely, during the winter of 1891-92. Along with the natural attractions, it is right in the centre (if we except California) of the most extensive bee-country in the world. Not many miles away are bee-keepers owning their 300 and 400 colonies. Then there are Messrs. Elwood, Hetherington, Hoffman, Tunicliff, Larabee, Martin, Manum, Crane, L. C. Root, Knickerbocker, Lockhart and Andrews, and a good many others that are entensive bee-keepers. As it is one of the policies of the International Association to migrate, I merely suggest that it might be well to consider the advisability of holding our next International on the border-line of the Northeastern States, namely, at some point on Lake George. Mr. Lockhart offers the use of his cottages, and if anybody knows how to entertain bee-keepers, he does. His cottages are right on the shore of a most beautiful bay.

Now, whether we meet at Lake George or not, it seems to me that it is expedient for us to begin to consider the location of the International in 1891-92, so that at the next meeting at Keokuk, the members may be prepared to vote intelligently and understandingly. I told the bee-keepers assembled that I would write to some of the ex-presidents of the Association, and other officers, and learn what they thought of it, and if they all agree that it might be advisable to bring the matter up in print, that Mr. Newman, Mr. Hutchinson and ourselves, would properly present the matter in our respective papers. I send a copy of this letter to Drs. Mason and Miller, Hutchinson, C. P. Dadant, R. L. Taylor, Prof. Cook, and perhaps one or two others.

I was very sorry to miss meeting you personally, Friend Newman, at the "Home of the Honey-Bees." You are a busy man, and it is not often we may have the pleasure of seeing you at our place. The Roots all unite in saying that they enjoyed your visit very much, and express the wish that you may call upon us again.

Medina, Ohio.

[We are very much in favor of holding the next meeting of the International Association at Plum Bay, N. Y., if it can be held during warm weather, and will do all we can to get it located there. We thank Bro. Ernest Root for the suggestion—also for the kind personal allusions to us and our late visit at Medina. The only thing to regret was his absence.—Ed.]

AT TORONTO.

The Awards of Premiums in the Apiarian Department.

Written for the American Bee Journal

BY R. F. HOLTERMANN.

As was anticipated, the competition in this line was unusually keen, the number of entries being as high as nine in some sections, and for the grand sweepstakes, seven. The neatness of display was far ahead of anything heretofore, and almost every exhibitor appeared to have a design different from any one else in his exhibit. Throughout, the judges had a task not to be envied, and with the competition so close it will not be surprising that some would consider that their own exhibits were more meritorious than the judges did, yet probably no one would say that the judges desired to do aught but what was right—certainly a good indication. The awards were as follows:

Best display of 200 pounds of extracted granulated honey in glass—R. H. Smith, Bracebridge, $10; J. B. Hall, Woodstock, $5; John McArthur, Toronto, $3.

Best display for 500 pounds of liquid extracted honey, of which not less than 250 pounds must be in glass, quality to be considered—Jacob Alpaugh, St. Thomas, $20; R. F. Holtermann, Romney, $15; J. B. Hall, Woodstock, $10.

Best display of 500 pounds of comb honey in sections, quality to be considered —J. B. Hall, Woodstock, $25; Jacob Alpaugh, St. Thomas, $20; John Davidson, Unionville, $12; Wm. Goodyear, Woodstock, $6.

Best display of 20 pounds of comb honey in sections, quality to be considered, that is to say, clean sections and best filled—J. B. Hall, Woodstock, $10; Will Ellis, St. Davids, $6; Jacob Alpaugh, St. Thomas, $4; Wm. Goodyear, Woodstock, $2.

Best display of 100 pounds of extracted liquid linden honey in glass, quality to be considered—Geo. Laing, Milton, $8; J. B. Hall, Woodstock, 5; Wm. Goodyear, Woodstock, $5.

Best display of 100 pounds of extracted liquid clover honey in glass, quality considered—R. F. Holtermann, Romney, $8; Geo. Laing, Milton, $5; J. McArthur, Toronto, $3.

Best beeswax, not less than 10 pounds (manufacturers of comb foundation excluded)—Jacob Alpaugh, $6; R. F. Holtermann. $4; J. McArthur, $2.

Best foundation for brood-chamber—Will Ellis, $3.

Best foundation for sections—Will Ellis, $3.

Apiarian supplies—E. L. Goold & Co., Brantford, silver medal.

Best style and assortment of tins for retailing extracted honey—E. L. Goold & Co., silver medal; R. H. Smith, bronze medal.

Best style and assortment of glass for retailing extracted honey—Jacob Spence, Toronto, silver medal; R. H. Smith, bronze medal.

Best section super for top story and system of manipulating, product to be exhibited in super as left by the bees—J. B. Hall, $3; Jacob Alpaugh, $2; R. H. Smith, $1.

Best and most practical new invention for the apiarist, never shown before at this Exhibition—Jacob Alpaugh, $5; George Laing, $3; R. H. Smith, $2.

Largest and best variety of uses to which honey may be put, illustrated by individual samples of the different things into which it enters as a component; for example, say one or two samples each in canned fruits, cakes, pastry, meats, vinegar, etc.—R. H. Smith, $8; R. F. Holtermann, $5; Geo. Laing, $3.

Best and most useful queen-nursery cage —Jacob Alpaugh, $2.

For most tasty and neatly arranged exhibit of honey in the Apiarian Department, all the honey to be the production of the exhibitor. Twenty dollars of this prize is given by the Ontario Bee-Keepers' Association—J. B. Hall, $35; R. F. Holtermann, $7.50; Jacob Alpaugh, $7.50; John Davidson, $5; Geo. Laing, $5.

The judges appeared to have extreme difficulty in awarding the last prize, and certainly the task was not an easy one. The quantity of honey in the building would at an estimate probably be about 20,000 pounds—12,000 pounds of extracted, and 8,000 pounds of comb honey. The majority was a mixture of clover, thistle and basswood.

Romney, Ont.

EGGS

Deposited by the Queen in the Queen-Cells.

Written for the American Bee Journal

BY E. L. PRATT.

I am thoroughly satisfied now that I was correct in my ideas about the queen depositing eggs in queen-cells.

One of our best queens is being superseded, and we have been saving the cells as fast as constructed. We have been furnishing the colony with cell-cups attached to bars, as with our regular system of queen-rearing. Twice we have caught this queen in the act of laying an egg in the cell-cups furnished, and many times have we seen her on the bar, surrounded with workers, which seemed to be coaxing her to a very difficult task. She would approach a cell-cup, peep into it, and pass on to the next in about the same manner as she would act on the combs when laying in worker-cells.

About the same amount of time was used in depositing the egg, when she was ready to do so, as is generally consumed in her regular duty, but she seemed loth to lay at first. After a little coaxing by the routine of workers, she thrust her abdomen into the cell, and withdrew it in a few seconds, leaving a new, shining, white egg, nicely affixed to the bottom of the cell. Where rivalry commences is after the queen-cells are completed. A queen will quickly destroy all unprotected capped cells.

We have had queens roam about an upper story containing a batch of cells, without molesting a single one—simply because they were not finished. When bees are superseding a queen, the finished cells are carefully guarded, the same as when after-swarming is about to take place. When eggs are removed to cells by the workers they are not glued, as the queen always does it, but are simply laid into cell-cups, and left until hatched, when they will be cared for in the regular way by the workers.

At swarming time I do not think that the queen objects to the laying of eggs in cell-cups, for she knows she will not remain to quarrel with the queen that comes from it. I have never seen a swarming colony's queen deposit eggs in queen-cells, but I have very often noticed that they were attached to the bottom in the usual manner.

I think that I am justified in making the statement that when there is a queen present in the hive, the eggs are always laid in the queen-cell cups by the queen; but when there is no queen, the workers attend to that part of the work when eggs are not available, or there is no larvæ of the correct age in the combs. Who knows but what the poor, destitute little bees borrow the paltry wherewithal to sustain life from their neighbors? I believe they do.

Marlboro, Mass.

BEE-ESCAPES.

The History of their Invention and Practical Use.

Written for the American Bee Journal

BY S. A. SHUCK.

A very interesting history, together with the illustrations and instructions for making bee-escapes, may be found in *Gleanings in Bee-Culture*, on pages 15, 200, 533, 681, 765 and 838 for 1888; and pages 735 and 857 for 1889. Suffice it to say here, that the credit of introducing bee-escapes for the purpose of freeing surplus receptacles of bees before removing them from the hives, belongs to Mr. J. S. Reese, of Kentucky; however, it appears that Mr. H. R. Boardman, of Ohio, had used escapes for the same purpose some two years before.

Mr. Boardman attached his escapes in a horizontal position to the outside of the supers, and permitted the bees to pass out into the open air; while Mr. Reese placed his escape in a perpendicular position with the point down, allowing the bees to pass into an empty super placed between the brood-chamber and the surplus receptacle to be freed of bees. Both of these plans worked reasonably well, but were inconvenient in their application; and, in further efforts to perfect this device, it appears that Mr. Reese, and Mr. C. H. Dibbern, of Illinois, at about the same time, attached a horizontal escape to a plain board to be placed between the super and the hive below. Mr. Reese afterwards inserted the escape in the board in such a way as not to occupy and space above or below it.

Concerning this arrangement, Mr. Dibbern says: "I admit that yours is an ingenious arrangement—something that I tried to conceive, but failed" (see January *Gleanings*, page 6). However, it appears since, that Mr. D. has claimed the invention, and after a hasty trial in the fall, winter and spring of 1889-90, he advertised and sold hundreds of these escapes. (See page 80 of the *Western Plowman* for 1890.) But it was found in testing these devices during the working season, that they are unsatisfactory. (See the *Bee-Keepers' Review* for July, and the AMERICAN BEE JOURNAL for June 28, 1890.)

It appears that Mr. Dibbern has corresponded far and near, securing patterns of all the escapes invented or tried by other bee-keepers, so far as he was able to do so, and from these he claims to have originated something *new*—an escape that is *perfect*. Of this new device the inventor says:

"I have cleaned the bees out of hives that were used as upper stories, and in which they were storing honey, in just two hours. It cleaned out every bee." He further says: "I have emptied numerous supers in which the bees had commenced work, also full hives used as supers over strong colonies. In no instance were there more than a dozen bees left after the escape had been on three hours."

While I shall not attempt to dispute Mr. D's statements as to the time required to clear the bees out of his supers, so far as he has experimented, I do wish to say that if he intends that we shall infer that his escape will do this as a rule throughout the working season, we must have a different race of bees from anything that has ever been tried in this country. No, there is no race of bees known that will quit any part of their domicile in so short a time, except where they are actually driven out.

I have used bee-escapes all summer—escapes, too, that I consider as satisfactory in their application as an apicultural device, as modern surplus arrangements or bee-smokers. I have taken off over 1,600 pounds of comb honey with as little inconvenience and less trouble with bees in my honey-house, than I usually experience in taking off a hundred pounds; and while in a few instances the supers have been cleared in a couple or three hours, in most instances it requires from two to four times that long, owing to the condition of the weather, and the quantity of bees in the hives, etc.

When it comes to forcing bees by means of an escape, out of well-filled supers, when the hive is so full below that a portion of the bees must hang outside at a temperature of 80°, Mr. D. will find that it will take three times three hours.

Concerning Mr. D's new escape, in closing he says: "It is to be hoped, however, that not more than a dozen will claim that they invented this new escape 'about the same time' I did." I cannot see why Mr. D. should have made such a statement, unless he would that others should *not* do as he has done; and lest he should want to charge me with being the first one of that "dozen," I will say here that I know nothing about any of his escapes, except that "Double-cone-wire-cloth-soldered-on-tin-now-perfect-get-one-and-get-it-just-right-bee-escape"—one of which a bee-keeping friend offered me for trial, but my faith was wanting, and I refused to give it a trial.

I have three different patterns in use—one cone. Two are entirely new and different from anything yet brought before the public; and to further assure Mr. D. that I shall not lay claim to any of his property, I will state that I am not the inventor of the escapes that I am using; and to show that the inventor is not disposed to lay any claim to Mr. D's escape, the ones I have here are small—about 1⅛ by 2¼ inches—I can carry a half dozen of them in my pocket, and as Mr. D's is some 4 by 6 inches, I trust that he will not lose any sleep by thinking that I am trying to claim his new invention.

CLIPPING WINGS.

Various Ways of Clipping the Wings of Queens.

Written for the American Bee Journal

BY FRANK COVERDALE.

The clipping of queens' wings has been objected to by some of our most prominent bee-keepers, and that for different reasons, namely, that the practice causes many of the queens to be superseded, and again, when the bees swarm, the queen (if one is not there) is apt to hobble off in the grass and be lost. Both of these reasons would indeed be very objectionable, that is, if true.

When I first began to clip my queens' wings, I, too, found some difficulty. One thing I did notice was, that some of my queens ceased to be prolific for several days after being clipped, and some would be missing. This state of affairs did not suit me, so I worked to find out the cause of this failure, and by continual practice I became master of the situation, and that there was no need of having my queens die, lose their prolificness, or be superseded on account of their wings being clipped.

My first lesson was on a fine, large, black queen. I picked her up with my left finger and thumb, and with a common pair of tailor shears, I clipped off three-fourths of one wing, and let her go. In about one week the hive was opened, and the queen was found to be all right, but she had not laid many eggs—not over one-third her usual amount, though in two weeks more she became as prolific as ever. This gave me strong evidence that her wing had been clipped too short, or in some way hurt, though I still clipped more almost as short, and once in a while the same trouble would occur, and often lose my queens (about one in ever ten).

So I began to clip differently, for there are tall trees about my apiary, and I do not like the fun of climbing 30 or 40 feet up into a tree after swarms of bees. I was prompted to still go on with the clippling. I began to think this: Why cannot I clip off the fan part of one wing, and leave the rib untouched? My queens were after this clipped in that fashion, and I have yet to lose one queen, or have one superseded because of being thus clipped.

We have been directed to clip both wings, the main reason for this being claimed that the queen will be found more easily while crawling on the comb amongst other bees. This is true, but there is another point that I think over-balances this, and prompts me to clip but one wing.

Perhaps some of the readers have been out hunting prairie chickens, and shot one, breaking one wing, and when attempting to fly, the sound wing will turn the chicken right around with its head towards the hunter. Then, again, crop the wing of a goose, throw it up in the air, and it will flop itself around; clip both wings, and the bird will hold straight ahead, until it falls to the ground, twice the distance away. It is just the same with a queen when swarming. If one wing only is clipped, when attempting to fly, the sound wing will turn her around, where if both were clipped alike, the queen would balance and go straight ahead, perhaps thinking that she would finally fly, thus greatly endangering her when the apiarist is not present.

Welton, Iowa.

AT WORK.

What is Going on in the Corner of the Garden.

Written for the Mass. Ploughman

BY GEO. A. STOCKWELL.

A tree overhangs and shades, and its branches bending down meet the scarlet runner and morning-glory twining up. The broad and beaming faces of Russian sunflowers make apples of gold in a picture of many colors, and a gourd running a race with the Lima bean, has begun to display its club of Hercules.

In this embowered nook is a colony of bees—the golden-tipped Italians—a hundred thousand strong. A hive, two stories and a half, is their domicile and workshop, and at this time (July 5) there is business of importance in this workshop, for the basswood cups are full and running over with light, amber nectar, rich in substance and aromatic in honey-flavor of the fairest hue and reputation.

The basswood plants, or trees, are great music boxes now giving forth the hum of a thousand or ten thousand bees, as they swarm in and out to drain the nectar from overflowing cups. A delightful melody it is, a gentle, soothing symphony. If you listen with an ear musically critical, you may catch the major and minor chords in the beautifully blended bee-chorus.

But the home of the workers a hundred thousand strong is in the shady angle of the garden. As you approach it, a streak of gold appears extending out from the entrance of the hive till the eye loses it. The bees coming in many directions, fall into line six feet in front of the hive, and together rush to the entrance, a steady stream in, a steady stream out.

Faster than the eye can count, the bees fall upon the alighting-board, and hurry within. A few drones stand upon the board stretching their legs and wings, and occasionally one approaches an in-coming bee, and thrusts out his tongue to be fed, for drones are too lazy to feed themselves, if any are willing to help, but the workers thrust them aside, jostle them, climb over them, saying plainly, "Get out of the way. Help yourself. No time to wait on you to-day."

With the honey-gatherers come the bees with pollen, their pockets or baskets full. What a falling of colors in stuffed baskets! blue pollen, yellow pollen, white pollen, pollen pink, red, orange, gray, black—a shower of brilliant pigments, disappearing in the hive.

We open the hive without disturbing the bees, except by the admission of light. It is a wonderful sight. Thousands of bees working "like mad," and yet in harmony without confusion and with precision and dispatch. Here are bees depositing honey, pumping it out of their honey-sacs—there are bees unloading their pollen-baskets, there is one tugging at a pellet of pollen that does not come out of its pocket easily. Another bee, a pollen-packer, hurries up to assist, and the operation reminds one of a man attempting to pull off another man's boots. Well, it's off already, and the bit of pollen falls into a cell.

The pollen-packer evidently is the overseer of this part of the industry, for there comes a bee with both pockets full of orange pollen, and is about to unload, when up rushes the head pollen-packer, and pushes him on further, which says plain enough, "Not in that cell, put it in this." The bee obeys and hurries away for more. The pollen-packer then dives head first into the cell which the pollen was deposited, and packs it, evidently using his head as a tamper, for the bee moves up and down as if he was throwing himself against that pellet of pollen to pack it hard.

The honey and the pollen-gatherers make only a part of this great force of workers. This is the "height" of the season, and the queen now enters upon her "great laying feat," laying two or three thousand eggs in 24 hours, and hence, if 3,000 eggs be laid to-day, 3,000 eggs will hatch in three days, and 3,000 full grown bees will walk forth from their cells in 21 days.

When the egg is deposited in the cell, a drop of honey is placed with it, so that the egg floats in it, or is surrounded by it. Thus is the table spread for the bee as soon as it breaks the shell. But as soon as the drop of honey is exhausted, the larvæ must be fed. The feeding of the thousands of young bees requires an army of nurses. The young bees are fed on "bee-bread," a mixture of honey and pollen, and if the nurses be not bread mixers or bread makers, then there must be an army of bread makers.

Besides all these workers there are builders—the builders of comb. The honey and the pollen gatherers climb over them, jostle them, and they are often under two or three deep, yet they are not disturbed, apparently, and continue their work of forming comb and cells from wax that exudes from their own bodies. The wax comes forth in little scales between the joints of the body. The bee dislodges these scales by the aid of muscular contraction and its six feet or hands, and after manipulating it, places it in position.

In addition to all these forces of the hive, there is another equally important, namely, the force of fanners. Thousands of bees are stationed throughout the hive to fan with their wings to create a draft, and to prevent the hive from becoming overheated.

In this great throng of busy workers moves the queen—the jewel of the colony—aye, a jewel of marvelous beauty, of burnished gold and bronze, her wings appearing like the most exquisite, the finest gold lace. As she moves in the throng the bees fall back, and stand facing her as she passes, many caressing her. But as she passes none follow. There is a momentary pause in that part of the workshop.

and then to work, too busy to loiter, but not too busy to pay respectful homage to their sovereign.

It may be supposed that the area of the queen's dominion is contracted so narrow, that she is practically with the entire colony all the time. This is not the fact. In this hive there is an area of more than 56 square feet of comb. The queen going from the outside comb on the lower tier, crossing every comb lengthwise, must travel 81 feet. Therefore a visit to every part of her dominion may not be a daily occurrence.

But in these sunny days when the bee is such a tireless worker that its span of life is only four or five weeks, the honey flows, the bees pour it into the hive, the honey from the basswood (linden) trees; the trees throughout the country are in bloom, and secreting more honey than bees in any force can gather, and if you listen under the trees, you will hear the hum of the gatherers.

SWARMING.

Manipulation to Prevent Natural Increase of Bees.

Written for the American Bee Journal

BY J. W. TEFFT.

Mr. Geo. F. Robbins, on page 312, says that he doubts my ability to perform, or rather keep my bees from swarming, etc.

On July 4 I manipulated 23 strong colonies, and examined some others. That was the first day this season that I had found a bit of new comb or sealed new honey, and things began to look bright once more.

Now it may, and it may not, be of interest to Mr. Robbins, or others, to tell them how I prepare strong colonies for honey, and to keep them at it until after the honey harvest without swarming. At the start I will state that my brood-chambers hold 12 1½-inch wide frames, 2 partition boards, and a 1-inch space outside of that for ventilation space, as the division-boards are bee-space above the bottom-board. Each colony has 10 frames for brood, and 2 for side storing in this way. I reversed all the brood-combs containing eggs and unsealed brood—the ripe, sealed brood did not require reversing. I drew from the brood-chambers two frames of ripe brood, bees and all, and placed them in the surplus chamber, then with a separator on the outside of the brood. I place the sections; this gives the colony 12 frames in the brood-chambers, and 6 in the surplus chambers. Six of the frames contain sections—48 ¾-pound.

As to the future management, providing there is a honey season, things become lively, the bees are storing honey, and the young bees are all hatched out of the two frames in the surplus chamber, I remove and extract the honey to have the combs empty to replace in the centre of the brood-nest. At the same operation I lift the two frames of side-storing sections, bees and all, to the surplus chambers; this operation wedges the brood apart, and at the same time keeps the surplus chamber full, and side-storing sections on all the season through. For instance, if I draw a frame of honey, I put in a frame of empty comb in the centre of the brood-chamber, and lift a frame, bees and all, to the surplus chamber. This method of management enables me to keep a large, powerful colony, storing honey in one hive, and I have but one hive to manipulate, where I had to manipulate 4 hives to obtain the same results. The system pleases me very much. Why, just think of it—23 colonies manipulated in less than three hours, and I had to nail up some sections at that.

You see there is a point gained by having frames space themselves, and not have to fuss to space by the eyes. Just think a moment—23 strong colonies containing 414 frames, and handling them all in so short a time! This wedging the brood-chamber apart, and removing outside combs of the brood-chamber to the surplus chamber, and removing honey at the same time, is all right, providing one understands reversing combs at the proper time to have the sections finished at all points. There is no mistake about the system, at all.

Buffalo, N. Y.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Sept. 26.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ill.

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 10, 11.—Union, at Hamilton, Ills.
Daniel Shank, Sec., Clayton, Ills.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.,
C. P. Dadant, Sec.; Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich
Sec'y. and Manager—T. G. Newman, Chicago

SELECTIONS FROM OUR LETTER BOX

Sour Honey—Pond Lilies.

I have some poplar honey that I extracted last spring, that is slightly soured. Will it hurt the bees to feed back this fall? I winter my bees in the cellar. What was the cause of it becoming sour? It was sealed up when I extracted it. Will heating it have any effect on it? Also, do pond-lilies that grow in marshes, produce any honey? C. Reynolds.

Fremont, O., Sept. 11, 1890.

[To give the bees the sour honey is the best thing that can be done with it. They will put it to a good use. The cause of its becoming sour would be difficult to state without examining it. It might have been *thin* and "watery," if the season was *wet* in your locality. The bees will seal up such honey just as readily as when it is thicker. Heating it will sometimes *sweeten* it, but care must be taken not to heat it too much, or the flavor will be "wanting." We do not think that pond-lilies yield much honey, if any at all. They have never been reported among honey-producers.—Ed.]

Results in Testing Carniolans.

Having read quite a number of articles praising the superior qualities of Carniolan bees much more than they deserve, and, what is noticeable, not a line from any of the *veteran* honey-producers, but from beginners and those who have queens for sale, it seems to me that those who have found them superior to the Italians must have had very poor Italians, or must have had a very limited experience.

In the spring of 1889, in the hope that they were a valuable acquisition, I resolved to give them a fair trial. I purchased 5 queens from some of the most noted breeders, and if any one of the queens was pure they were all pure, as they were all alike, and of their purity I have no doubt. I reared several hybrids, and had a few purely mated queens from them. Now for the results :

When compared with the best Italians, they are very cross ; the hybrids the same. In April their brood-nest was less than half that of the Italians ; in May they bred rapidly, and were the first to make preparations to swarm, though only having about seven-eighths as much brood as the Italians. They swarm much worse than the Italians, especially in July and August, when little or no honey is being gathered, having to be fed, or starve. They are stronger to winter, from the fact that they breed more in the hot weather of July and August, and when they are not getting honey. The Italians require more care to keep the brood-nest strong in the fall, or when honey is coming in very freely. The Carniolans got about two-thrids as much honey for me as the Italians—in fact, I find them inferior in my locality in every desirable trait.

As to their wintering, I can say nothing from experience, both races having wintered perfectly without loss—25 Carniolan and hybrid colonies, and 146 Italian colonies. I keep none but strong colonies, and work them for honey, allowing no increase. I have been producing honey for 20 years, and I think that I have had enough experience to judge fairly between the different races, having produced about 200,000 pounds in that time. I have totally and forever discarded the Carniolans—at least in this locality ; and I have no queens of any kind for sale. My advice to those who desire testing the above race is, to go slow and not waste much money until you know that you are right.

Deer Park, Mo. **E. C. L. Larch.**

An Enthusiastic Bee-Man.

I began a year ago with one colony, and now I have five. They are hybrids, and good workers. I am very enthusiastic, and try to learn all about them that I can from the papers, and the Bee Journal makes very plain a good many things that were hard to understand. **S. M. Parker.**

Lohrville, Iowa, Sept. 12, 1890.

Bloom Failing to Secrete Nectar.

I have read Mr. Theilmann's article on page 602, and I now want to try to tell some of my experiences and observations on the cause of flowers failing to secrete nectar in some years. Most bee-men think that electricity has everything to do with the secretion of nectar. I can say (and know what I am talking about) that it does not have anything to do with the secretion of nectar. I have proof that proves beyond a doubt that this is correct.

Where I live there is plenty of linden, sourwood, and what is called "mountain ivy"—I do not know its botanical name—but I know that when the ivy has any honey, sourwood and linden will fail to have honey without doubt. The ivy blooms first, and but two weeks before linden, and four or five weeks before sourwood. If ivy fails to have any honey, linden and sourwood will have honey, as certain as it blooms. Let every bee-man that lives where linden, sourwood and ivy abound, watch carefully, and they will see that the above is true.

All flowers that bloom or open like linden, sourwood, apples, peaches, cherries, etc., have the honey in them before they bloom—if it is not there before the flower opens, it will not be there at all. Any bee-man can test that to his own satisfaction. Any weather that seems to stop the flow of nectar, that is so cool that it checks or stops the flowers from opening, or is so hot that it dries the nectar up in the flowers : such a storm or rain as Mr. Theilmann speaks of first washes all the honey out of the flowers, and then it generally turns cool, and nearly stops the flowers from putting forth for a few days, nearly as fast as they do when warm weather prevails.

Mr. Theilmann thinks that a good honey-flow and bark-lice are connected in some way. It is just the reverse here to what it is with Mr. T. A poor honey season here is the time that the aphides put in an appearance. It has been that way ever since I have been in the bee business, which is 13 years.

I have seen the bark-lice eject the honey from them lots of times. I have seen it come from different kinds ; some have wings, and some do not. Those that have wings do not have any until full grown, and then they fly away ; but there is another sort that have no wings, and are about the size and shape of a grain of coffee, and the color of the bark. The honey comes out of them on their backs, and small drops come out about once in every minute, and keep right on in that way. The small drops come out and stay about long enough to be seen, when, with some power of their own, the aphides throw off the drops at a right angle behind.

Samuel Wilson.

Cosby, Tenn., Sept. 11, 1890.

A Species of Spanish-Needle.

I send by this mail a few flowers of what we call Spanish-needle in this locality. Whole fields of 40 to 80 acres that were sown to wheat and oats are a perfect yellow mat of these flowers. I would like to know if there is more than one variety of this plant. Is it not possible that some of our bee-keepers get this plant and golden-rod a "little mixed ?" That is, call this flower "golden-rod," and *vice versa*. I think that the above, to some extent, accounts for the great diversity of opinion among bee-keepers, as to the value of the golden-rod as a honey-plant. If I ever saw a golden-rod plant or flower, I do not know it—there is none here, or else it is called by a different name.

The flowers I send are the best honey-yielding flowers we have—colonies often gathering a surplus of 100 to 150 pounds each of fine, rich, yellow honey, from this plant alone. The white honey crop was almost a failure here. I got a surplus of about 15 pounds per colony. My fall crop will be about 40 pounds, per colony, of extracted honey. **Byron Iiams.**

Worcester, Mo., Sept. 8, 1890.

Prof. C. M. Weed replies to the above as follows :

The specimen sent differs slightly from Spanish-needle (*Bidens frondosa*), but is that species rather than any other. It probably is a hybrid between *B. Frondosa* and some species of coreopsis.—**C. M. Weed.**

Experience with Bees, Wintering

Three years ago last spring I commenced with 3 colonies, increased them to 7, sold 2 swarms, and took 300 pounds of honey. The second year they increased to 19, and I took over 600 pounds of comb honey. The third spring one colony swarmed out, and one was queenless, which left me 17 ; they increased to 42, and I took over 1,500 pounds of honey. Last spring I put out 42, one swarmed out, and some were weak, and May was cold and dry, so I doubled up until it left 36 strong colonies, increased to 67 ; I sold 4 swarms, and I have taken off 1,000 pounds of basswood honey, and there is about 1,000 pounds of fall honey. Fully half of the basswood did not bloom at all, so we will not have more than ¼ of a crop.

I never have lost a colony in winter. Somebody says that a bee cellar must be a *bee*-cellar. I could not get all of my bees into my cellar last winter ; it is only a hole 10 feet square under my log house, with an outer doorway to go in. I have always wintered my bees in it with my winter supply of garden-truck. Last winter I had 28 colonies of bees, and 30 bushels of potatoes, besides meat, vinegar and soap barrels, and a lot of garden-truck, so I could not get down on the bottom of the cellar. We go down through a trap-door in the floor, and some one went down about every day after something. I leave the entrance just the same as when on the summer stands, and pack a surplus case of dry leaves and put it on top. I dug a hole in the ground 2 feet deep, and just large enough to let the other 14 colonies in, and made a tight cover with boards, and covered them up with dirt, leaving a hole in the center 6 inches square, for ventilation. I also put a hole through the outer door cellar-way, that I could open and close to cool the cellar. I kept it at about 40 to 45 degrees, and I saw no difference between those in the cellar and those in the cave. The cellar is always dry.

The bees are working on golden-rod and wild sunflowers now. The American Bee Journal has been worth $50 to me in the last two seasons. **Geo. H. Auringer.**

Bonniwell's Mills, Minn., Sept. 13, 1890.

Bees Gathered Little Honey.

Bees have done very little here the past season, considering that there is lots of clover (white, red and Alsike), and that my 12 colonies came out in good condition last spring, with one exception. I do not understand why they have done no better. I sowed four acres of Japanese buckwheat that bloomed profusely, and the bees worked on it continuously, still I have several old colonies that have not stored an ounce of honey in the sections. What honey I got last year and this, came from new colonies. Bees here the past season took a great notion to abscond. I lost 3 colonies that I know of, and I think that many others left—it was the general complaint. I have come to the conclusion that bees for profit in this place is a poor business. I wintered my bees out-of-doors last winter, and packed barley-straw and chaff around them, except in front, where I placed a wide board ; but it took me nearly all summer to get them far enough from each other to work about them. Will some one tell me at what time in the spring to put the bees out of their winter shelter without injury? If so, it will relieve me from quite a quandary.

Wm. M. Maxwell.

Oakland, Iowa, Sept. 15, 1890.

Susquehanna County Convention

The Susquehanna County Bee-Keepers' Association met at the graded school building at Springville, Pa., on Saturday, Sept. 13, 1890, with a good attendance, considering the weather. In place of a regular programme, those present were invited to ask for information upon any points which they did not understand. All questions asked were fully and freely discussed, in which discussions we were ably assisted by prominent bee-keepers from adjoining counties. All present departed for their homes feeling that the meeting had been both a pleasant and profitable one.

Harford, Pa. **H. M. Seeley**, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

DENVER, Sept. 15.—We quote: 1-lbs., first grade, 16@18c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Sept. 20.—We quote best white clover 1-lbs. at 17@18c.; 2-lbs., 15@16c. Extracted, 7½@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

NEW YORK, Sept. 12.—Honey is in excellent demand, and finds ready sale at the following prices: Fancy white 1-lbs., 16@18c; same, 2-lbs., 14@15c; off-grades, 1-lbs., 13@15c; same, 2-lbs., 12@13c; buckwheat, 1-lbs., 11@12c; same, 2-lbs., 10@11c. Extracted, clover and basswood, 8c; buckwheat, 6c; California, 6¾@7c. HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Sept. 10.—Honey has sold well of late, despite the higher range of prices—17@18c being the value of white comb in 1-pound sections, and sells upon arrival; the weather being cool, a brisk trade is now being experienced. Extracted also sells quickly at 7@8c in barrels and cases. Supply fair.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Sept. 20.—Demand for comb honey continues good, but supply light. We quote: Choice white 1-lbs., 16@18c.: light 1-lbs., 14@16c.; dark 1-lbs., 10@12c. Extracted white, 6@7c.; dark, 5@6c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Sept. 10.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 11.—Demand for comb honey is larger than the receipts. We quote: White 1-lbs., 16c.; 2-lbs., 14c. Dark 1-lbs. 13c.; 2-lbs., 12c. Extracted, white, 7c.; dark, 5@6c. No beeswax on the market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 10.—Comb honey is selling at 14@16c; very little in the market. Extracted, 7@8c. Beeswax, 26c for good.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, Sept. 8.—Honey of all kinds is scarce. There is almost no comb honey in this city. But what is of greater importance is, that we have hardly enough extracted honey to supply our manufacturing customers. The "hold-on" doctrine is bad policy, as we are sure to be overstocked again about Christmas time. Such has been the case generally, and is likely to repeat itself in a great country like ours. Choice comb honey would bring 15@16c. Extracted brings 5@8c. Beeswax is in good demand at 24@26c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

◆

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send.

◆

Thirty Years Among the Bees is the title of a new illustrated pamphlet of 75 pages, by Henry Alley. It gives the results of the 30 years' experience of the author in rearing Queen-Bees, with all the latest methods brought down to the present time. Price, **50 cents.** For sale at this office.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
51D26t 1m1y.

Will Exchange—A House and Lot in Lima, Livingston Co., N.Y., for full Colonies of Bees—Italians preferred. One of the oldest and best Seminaries in the State located there For full particulars, address J. S. VANDENBERG, Box 117, Canandaigua, Ontario Co., N. Y. 39A1t
Written for the American Bee Journal

WISHING to change all my Bees to 5-BANDED GOLDEN ITALIANS, I offer 25 Tested and 10 Untested Italian (3-banded) Queens at 50 cts each. Some show the 4th band—good, serviceable Queens.
39A1t JACOB T. TIMPE, Grand Ledge, Mich.
Mention the American Bee Journal.

SITUATION OFFERED—To a competent wood-worker, who thoroughly understands the manufacture of BEE-HIVES, SECTIONS, etc. Address, with references, W. H. PUTNAM, River Falls, Wis
38Atf
Mention the American Bee Journal.

Muth's Honey-Extractor,
Perfection Cold-Blast Smokers,
SQUARE GLASS HONEY-JARS, etc.
For Circulars, apply to
CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.
P. S.—Send 10c. for Practical Hints to Bee-Keepers.
Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, S **cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills
Mention the American Bee Journal.

TAKE NOTICE!

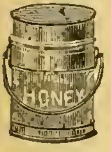
BEFORE placing your Orders for **SUPPLIES,** write for prices on One-Piece Basswood Sections Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. Address,

R. H. SCHMIDT & CO.,
1A1y NEW LONDON, Waupaca Co. WIS.
Mention the American Bee Journal.

NOTICE **Religious Reading Matter** free to all who will address Box 1516,
39A1t **Fresno City, Calif.**
Mention the American Bee Journal.

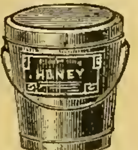
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon,..holds 10 lbs ..	$1.80....	$12.00
½-Gallon, holds 5 lbs....	1.50. .	9.00
Quart, holds 3 lbs	1.20...	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25. ..	$ 1.50.. .	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
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Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way ; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid ; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25 ; or the two Journals and the Book for $2.00.

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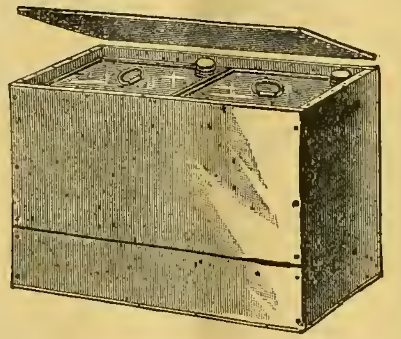
SHIPPING CRATES !

WE MAKE THEM NEAT AND CHEAP.
WRITE FOR PRICES.

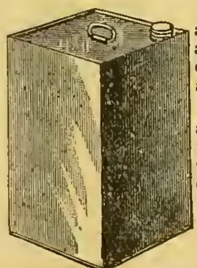
G. B. LEWIS & CO.
35Atf **Watertown, Wis.**

Mention the American Bee Journal.

SQUARE HONEY CANS



The above illustration shows the 60 pound Square Honey Cans which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can ....(boxed).........		$ .45
12 " Cans ...	"	5.00
100 " " ...	"	40.00
1 box of two Cans...............		.75
12 boxes "	....	8.40
100 " "	....	65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Choicest Italian QUEENS !

Purely BRED—**Purely** MATED. Won first premium over all competitors at Buffalo International, September, 1889. None Better in America ! Send for Price-List. Order **early.**

Great reduction in price. Former prices superseded. Select tested, $1.50; Tested, 75c. Five Apiaries to draw from. Can ship by return mail in any quantity.

E. D. KEENEY,
Importer and Breeder,
ARCADE, - NEW YORK
33Atf

Mention the American Bee Journal.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,

34Atf **J. A. KING, Mankato, Minn.**

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NO TROUBLE TO BUILD

if you start right. The first step should be an examination of Mr. Shoppell's building designs—the only large collection of designs that are artistic, practical and reliable. The estimates are guaranteed. Mr. Shoppell's publications are as follows:

						Price.
*Portfolio	of	$1,000	Houses,	30	designs,	$2 00
"	"	1,500	"	30	"	2 00
"	"	2 000	"	30	"	2 00
"	"	2,500	"	30	"	2 00
"	"	3 000	"	32	"	2 00
"	"	3,500	"	31	"	2 00
"	"	4 000	"	30	"	2 00
"	"	5 000	"	30	"	2 00
"	"	6,000	"	28	"	2 00
"	"	7 500	"	22	"	2 00
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"	"	Stables	"	19	"	2 00

*The first Portfolio contains designs that cost as low as $500, $600, $700 and $800.

Any 3 of the above Portfolios for $5; any 7 for $10; the complete set (12) for $15. Bound volume containing over 200 designs selected from the various portfolios, price $5, returnable if not satisfactory.

Address R. W. SHOPPELL,
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LOOK HERE!

TESTED Italian Queens, $1.00 each; Untested, 75c.; 12-pound Shipping Cases in flat, per 100, $6.00; 2x9 glass for same, per 100, 70c.; per 500, $3.00. Price-List free.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Oct. 4, 1890. No. 40.

EDITORIAL BUZZINGS.

Better to smile while we live, than frown,
Better to love, than to gain renown.
Better to comfort some aching heart
Than to do in battle a warrior's part.

Fred A. Bee is the Chinese consul at San Francisco. A Bee is naturally associated with the Flowery Kingdom.

The Northwestern Convention at Chicago will not convene this year. The Officers have consulted and arrived at the above conclusion. The time for holding it is so near to that of the International, that it would be very difficult to make two conventions a success, when both cover the same territory, and are of a National character.

Mr. W. Z. Hutchinson, we are sorry to say, has been quite ill for some time with malarial fever and rheumatism. He is improving, but not yet able to work. The Honey Shows he has attended have been wearing on his constitution, and when we saw him at Detroit he was not feeling well, and we feared that a period of sickness might be the result.

Fire destroyed the home of Mr. J. T. Wilson, of Little Hickman, Ky., on the 8th inst. We hope it was fully insured. It is *a duty* all owe to themselves and their families, not only to insure their property, but their lives also. We maintain that it is criminal negligence to neglect this duty, unless any one is rich enough to provide against such loss in other ways.

It is 30 Years next January since the first number of the AMERICAN BEE JOURNAL was issued. We shall celebrate that Anniversary by enlarging the JOURNAL to 32 pages in each issue—with TWO COLUMNS to the page, making it of the same size as it was formerly, and similar to the other bee-periodicals. This will be done to give more room for reading matter, as well as for advertisements.

Now we want our friends to assist us to inaugurate a

FALL AND WINTER CAMPAIGN,

and help to secure thousands of *new* subscribers by the end of this year. To aid them in doing so, we will make this very liberal offer :

If, you will send us the names and addresses of bee-keepers of your acquaintances, or those in your locality, who do not take the BEE JOURNAL, **we will send it to them free of cost for 4 weeks,** just to show them its character, as well as its value to the pursuit. We think that they will conclude that they *need* it at the end of that time, and will have their names enrolled among its regular subscribers.

If the senders of the names will then call upon them and get their subscriptions, we will cheerfully forward them such Premiums for doing so, as they may select from our Premium List, which will be published very shortly and sent to all.

We confidently request all our friends to aid us in this noble work, of trying to *post up* those who keep bees, but who are not keeping up with the times, by reading the bee-literature of the day.

To have all your bee-keeping neighbors and friends fully posted about the "supply and demand" for honey, and to produce and market it in the most attractive manner, is to your interest as much as it is theirs. Then they will have no excuse for breaking down the market price, and thus ruining the home market.

Reader, please sit down *now* and write the list of names before it passes out of your mind, and accept our thanks in advance for what we feel assured you will cheerfully do in the interest of the pursuit.

Those who receive such copies of the BEE JOURNAL, not having subscribed for it, are hereby informed that it is sent as a *Trial Trip*, and they will incur no financial responsibility in taking and reading it. We hope they will like it so well as to subscribe for it for 1891, and get all the rest of this year's numbers *free*. This paragraph will be marked with a *blue* pencil when sending to each person the first Trial Trip number.

We Regret to announce that Mr. James B. Mason, editor of the *Bee-Keepers' Advance*, has been unwell, and consequently the September issue has but just made its appearance.

A Correspondent who, when pleased always lets it be known, and when not satisfied with any matter, is a regular "growler from Growlerville," writes thus :

> I see that the International American Bee-Association is to meet Oct. 29, 30 and 31, but if any wants to know what the railroad or hotel rates are to be, that they must write to the Secretary to find out. What nonsense ! Why not give us that information in the bee-periodicals? They have always given space for such matters "free gratis for nothing." It would save lots of writing and postage, and the time of the Secretary answering.

When such "nonsense" occurs, our friends may be sure there is some good reason for it. In this case, application was made to the Western Railroad Association for reduced rates, and the Managers placed the application on file, and kept the Secretary waiting four months for an answer. It is now under consideration, and if we get a definite answer in time, the announcement will be made in this issue of the BEE JOURNAL. If not, it will certainly be in the next number. The programme, with a statement of hotel accommodation, will be completed in a few days, and will be published as soon as it is received at this office.

The Secretary is doing all that can be done to perfect the arrangements, and it is no easy task, we assure our friend from Growlerville. We speak from experience, as we have held every office in the International Association, and know the amount of work necessary to be done, as well as the energy required to do it.

This is what Dr. A. B. Mason, Auburndale, Ohio, has to say about our book, "Bees and Honey :"

> The last edition of your book, "Bees and Honey," received a short time since, fully sustains your enviable reputation as a writer and publisher. It is "just splendid." The addition of the faces of so many well-known bee-keepers to its pages materially adds to its value. It is my handiest book of reference. I have copies of previous editions, but this is the best of all.

The International American Bee-Association will meet in Keokuk, Iowa, Oct. 29, 30, and 31. As this is the first meeting west of the Mississippi, in the twenty years of the existence of the Association, a large attendance is expected, especially as our leading publishers and a number of bee-keepers of note will be there. All communications should be addressed to C. P. Dadant, Hamilton, Ills.

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Oct. 8.—S. W. Wisconsin, at Platteville, Wis.
B. Rice, Sec., Boscobel, Wis.

Oct. 10, 11.—Union, at Hamilton, Ills.
Daniel Shank, Sec., Clayton, Ills.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 18.—York & Cumberland, at Goodman's Mills, Me
C. W. Costellow, Sec., Waterboro, Maine.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1.—Michigan State, at Detroit, Mich.
H. D. Cutting. Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich
SEC'Y. AND MANAGER—T. G. Newman, Chicago

GLEAMS OF NEWS.

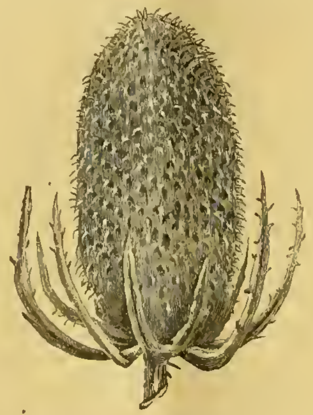
A Lady's Exhibit at the Nebraska State Fair was so attractive and magnificent that it called out these remarks by the Lincoln *Journal* :

> Each recurring State Fair finds Mrs. J. N. Heater, of Columbus, in the Apiary Department with a fine display of honey and bee-keepers' supplies.
>
> Visitors to this department for several years past have noted the variety and quality of the display made by Mrs. Heater, until no one will be surprised to learn that this season she has practically no competitors. Her exhibit occupies nearly two-thirds of the building, and consists of extracted honey, granulated honey, beeswax, honey-vinegar, bees and queens, and all kinds of bee-keepers' supplies, including hives, extractors, comb foundation and frames, all tastefully arranged.
>
> Mrs. Heater has personal charge of the display, explaining its mysteries to the uninitiated, and pointing out the latest novelties to those who try to keep pace with the improvements in bee-culture. In fact, Mrs. Heater has done as much to encourage bee-culture in Nebraska as any one in the State. She has devoted her entire time to the business for the past ten years, and her apiary at Columbus is a monument to her success, showing at the same time that bee-culture in Nebraska is a success when conducted intelligently.

The Golden-Rod Wins. — New York's public schools have chosen the golden-rod as the State flower. The rose made a strong fight, and came in a close second. The Superintendent of Public Instruction, Mr. Draper, has announced the the vote as follows : Golden-rod, 81,308 ; rose, 79,666 ; daisy, 33,603 ; violet, 31,176 ; pansy, 21,202 ; lily, 16,438 ; lily of the valley, 11,626 ; trailing arbutus, 7,388 ; buttercup, 6,127 ; scattering, 29,045 ; total, 318,079. The scattering votes were distributed through 121 varieties.

Teasel.—It seems that there are two kinds of teasel, one of which was illustrated on page 580. Mr. C. M. Goodspeed, of Thorn Hill, N. Y., writes as follows concerning the two varieties of this honey-producing plant :

> On page 580 is given an article on the teasel, but unfortunately it is accompanied with an illustration of a wild teasel, which gives a very poor idea of the cultivated plant. The engraving shown here is of the "fuller's teasel." So many people are familiar with the wild teasel, and confound the two, that I think it well to make the correction. The wild plant has straight spikes on the burr, or teasel proper, and are not strong, being easily crushed in the hand ; while the fuller's teasel for every spike has a strong hook, that will readily penetrate the hardest hand, if not carefully handled.



Cultivated Teasel for Fuller's Use.

Sun-Flowers and Golden-Rods.—Byron Iiams, of Worcester, Mo., writes ;

> I enclose five flowers, each numbered, which I would like to have named in the AMERICAN BEE JOURNAL.

Prof. C. M. Weed, by request, gives the botanical names of the flowers sent by Mr. Iiams, as follows :

> The five plants recently sent are such fragmentary specimens that it is impossible to determine specifically three of them. No. 1, is a *Helianthus*—a kind of sun-flower. No. 2, is *Solidago rigida*—golden-rod. No. 3 is *Solidago lanceolata*—narrow-headed golden-rod. No. 4 is a *Helianthus*—sun-flower. No. 5 seems to be a *Silphium*—some species of cupweed.
>
> I would suggest to correspondents the necessity of sending lower leaves as well as flower-heads.—CLARENCE M. WEED.

Bees and Fruit.—W. A. Webster, of Bakersfield, Calif., writes thus to the *Pacific Rural Press*, on the subject of bees and fruit :

> It is the candid opinion of the writer that the injury to fruit which is charged to bees begins with decay, birds, yellow-jackets and other pilferers, and the offices of the bee are such as are only beneficial in the economy of nature. The province of the honey-bee is to fertilize the blossom and save the nectar from it and from decaying fruit. A bee is guided to its legitimate plunder by the sense of smell, and, I believe, never punctures the skin.

Interesting Statistics.—The following is taken from the New York Weekly *Witness* of Sept. 6, 1890 :

> Last season an interesting trial of the industry of bees was made at the Rhode Island Experiment Station by placing a hive on scales and frequently recording its weight. Beginning with June 11, on which date no gain was made, the increase fluctuated from nothing to 2¼ pounds per day. During July the greatest increase in any 24 hours was 2¾ pounds per day. This was a colony of fair strength, and the weighing was done between 4 and 5 a.m., before the bees left the hive. There were 20 days during which a decided gain was noticed, six in which no gain nor loss took place, and 18 days of loss. The gain was 22¼, and the loss 15 pounds, leaving a balance of 7¼ pounds.
>
> In this connection it may be stated that the Rhode Island Station Bulletin No. 4 treats upon bee-keeping, and some of the statistics given are interesting. The value of the annual honey and wax production equals that of the rice or hop crop of the country, and falls but little short of buckwheat. It exceeds maple syrup and sugar, and also all the vegetable fibres excepting cotton ; and yet not over 8 to 10 per cent. of those favorably situated for cultivating bees, keep them. In many localities where bees might be kept to advantage they are entirely neglected.

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

A B C of Strawberry Culture is the name of a neat pamphlet of 150 pages, by Messrs. T. B. Terry and A. I. Root. It covers the whole subject in an interesting manner, is nicely illustrated, and is just the work for those beginning to grow delicious strawberries. Price, postpaid, 40 cents. For sale at this office.

Thirty Years Among the Bees is the title of a new illustrated pamphlet of 75 pages, by Henry Alley. It gives the results of the 30 years' experience of the author in rearing Queen-Bees, with all the latest methods brought down to the present time. Price, **50 cents.** For sale at this office.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 671 of this paper.

Golden Bees and Quiet Groves.

Written for the Phrenological Journal
BY GEO. W. BUNGAY.

The sweet briar and the arum blush,
The blossoms purple, gold, and red,
Are flames with voices in the bush,
And holy seems the ground I tread.
The golden bees
Mock Memnon's softest melodies.

In shadows of the wood I lie,
And dream, unwaked by noisy marts,
Where smoke and dust veil not the sky,
Nor hammers beat on human hearts,
Nor shuttles fleet
Weave life into a winding sheet.

The summer leisure of the birds
Is mine, and brings refreshing rest ;
The flowers are many-colored words
'That happy Nature writes, and blest
Is he who spells
Aright the sylvan syllables.

Here I can rest my weary brain ;
And win for health and life a lease,
And gather strength to fight again
The war that wins the spoils of peace ;
This rural calm
Soothes the tired heart like healing balm

When the pale axe-man strikes the stroke,
And stills the quick life in my bosom,
Plant near my grave a sapling oak,
And violets of azure blossom.
The oaken staff
My shaft !—the flowers my epitaph !

QUERIES AND REPLIES.

The Building of Drone-Comb by Queenless Bees.

Written for the American Bee Journal

QUERY 732.—Is this a fact, as I see it stated ? Will a queenless colony, if given a chance, by placing a frame of foundation in the centre of the brood-nest, build drone-comb only ?—New York.

Yes, sir.—JAMES HEDDON.

I have never tried it.—MRS. L. HARRISON.

Not drone comb *only*, but drone comb principally.—G. L. TINKER.

My experience has been that queenless colonies always build drone comb.—A. B. MASON.

If it is worker foundation, I should expect to see worker comb ; except, perhaps, a very few cells.—C. C. MILLER.

I never tried it with worker size foundation ; but they will build drone-comb without foundation.—EUGENE SECOR.

Queenless colonies without foundation build only drone combs. Whether they will build drone-comb on worker foundation I do not know.—M. MAHIN.

Queenless colonies will only build drone-comb, except in case foundation is given them. Then they will draw out the worker-cells.—A. J. COOK.

Whatever comb a queenless colony builds is invariably drone-comb. I have never given queenless colonies comb foundation, but I think they would draw it out or finish it into brood comb.—P L. VIALLON.

I do not understand the question. The colony would generally build drone-comb in a vacant space, but would not often convert worker foundation into drone-comb.—R. L. TAYLOR.

Bees will not change worker-cells into drone-cells ; and, although we have not tried comb foundation on a queenless swarm, we are sure that they would build it of the kind furnished.—DADANT & SON.

If the foundation is worker-comb size, the bees will complete the worker-cells ; but they will take good care to make drone-cells at every available point—at stretched cells and around the edge.—J. P. H. BROWN.

Where did you see that stated ? Foundation is used so that the bees will not need to build comb. Worker foundation will be drawn out all right by queenless bees. When building comb, such bees build only drone-comb.—G. M. DOOLITTLE.

It depends upon the foundation, but as a rule queenless colonies build drone-comb only. With worker foundation they will draw it out as it is, except where the stretch is found ; then they will probably build up drone-cells.—J. E. POND.

They will invariably build only drone-comb in an empty frame. I do not see how they could build all drone-comb on worker foundation ; but a trial ought to establish the fact.—C. H. DIBBERN.

While it is a *fact* that the "comb" built by a queenless colony will be, mainly, drone-comb—it is *not a fact* that when worker-comb foundation is given to a queenless colony, that it will be changed to drone-comb, in the drawing out ! Worker-comb foundation is now the only kind made, and has been "the only kind" for ten years or more. When such is given to a queenless colony, it will be drawn out into worker-cells as a general thing—the exceptions being in the outer edges, or where the cells are "stretched" or out of shape by "sagging," or something of that kind. There, some drone-cells may be found in a queenless or any other colony, if the bees find a necessity for such by the condition of the colony. As worded, the question is quite unintelligible. The propounder of the question should have cited us to the place where the *supposed fact* was stated, if such a statement was ever made ! There is too much of an admixture of "fact and fancy" in it for ordinary mortals to comprehend ! Who would ever imagine that "placing a frame of foundation in the center of the brood-nest," would be giving the bees "a chance" to "build drone comb only ?" The way to give them the "chance" to "build drone-comb," is to withhold the foundation entirely ! Just the opposite of the idea in the question ; if, indeed, it contains any "idea" at all.—THE EDITOR.

Food for Bees—Bee-Stings.—Mr. B. F. Sword, of Lanark, Ills., on Sept. 22, 1890, wrote as follows concerning the feed- of bees for stores :

Please publish in the BEE JOURNAL how to prepare something to feed the bees. I think that I will begin to feed mine early, so that they will go into winter quarters in good condition. This has been a poor season for honey. I sowed some Japanese buckwheat, but there was no nectar in it. For bee-stings, apply Dr. Price's triple extract (or essence) of peppermint, and you will never use anything else.

In reply to the above regarding the feeding of bees for winter stores, we take the following paragraphs from our book—"Bees and Honey"—which will answer others who have asked for information on this subject just now :

"For feeding in fall for winter stores, three pounds of coffee A sugar and one pint of boiling water, simmer five minutes. Feed this inside the hive with a division-board feeder, or in a tin can with a course cloth tied over it, and inverted on the frames. For fall feeding, estimate the amount required, and give it as fast as the bees can store it in the combs.

"For winter feeding, use four parts of coffee A sugar and one part water ; simmer until it becomes quite hard on being cooled, mould into frames of one inch thickness, and lay it on top of the frames, using sticks underneath ½ inch square ; or mould it in brood frames, tie hemp twine around to hold it in place, and put it in the center of the brood-chamber."

◆

Scrub Drones.—Mr. S. M. Parker, of Lohrville, Iowa, asks the following questions :

1. Can we trap all of the drones from our hybrid colonies of bees, and, by keeping one colony of pure Italians in the same yard, get the queens of the hybrid fertilized by them ? 2. Would it be more satisfactory to introduce pure blooded queens ?

It is always possible, but not often practical, to prevent drones from flying from certain hives by force. Our method has been to keep drone-comb out of the hives where we did not wish to propagate the blood, and put the same combs in hives where we did. Perhaps it would be better to introduce good queens all around.—JAMES HEDDON.

An Aster.—Mr. H. A. Spencer, of Iowa City, Iowa, on Sept. 24, 1890, writes as follows :

I enclose a blossom of some kind of a weed that grows very rarely in Central Iowa. Bees fairly swarm over it all through the day. Will you please inform us what it is, and what quality of honey it produces ?

It is one of the aster family. It is an excellent honey-producer, both as to quantity and quality.

Uniting Colonies.—Mr. J. Knowles, of Edmanton, N. W. Territory, asks this question :

Would uniting a queenless colony with an after-swarm be safe ? Will it pay to do it ?

Yes, it will be safe, and it will pay to do it, provided you do it right. No stereotyped rule can be given for succeeding, so much depends upon surrounding conditions, time of year, and all that.—JAMES HEDDON.

How Often Do Bees Eat ?—Geo. W. Smith, of Van Meter, Iowa, asks :

How often in 24 hours does the queen-bee, the drone, and the worker feed ?

[When they get hungry and food is obtainable.—ED.]

CORRESPONDENCE.

COLORS OF BEES.

Color and Markings of Bees Indicating Characteristics.

Written for the American Bee Journal
BY W. S. VANDRUFF.

My observation and experience the past ten years from purchasing and testing queens from all the principal queen-breeders, have led me to the conclusion that but few are pursuing the right course to produce the *best* bees.

A few years ago the Albinos were "all the rage," and I have tried many different strains of them; but I find that the breeders of these bees seem to have nothing in view but the white bands of hair, and have neglected to preserve the three yellow bands, so that many show but little yellow on the third band, and not as much as they should on the first and second.

Latterly, it seems that the golden Italians are having a boom, and I have tried different strains of these bees, also; and I find the same fault with the breeders of these bees, as with the Albinos—they seem to be sacrificing *all* other colors for the *golden* yellow. I have had bees of this strain that had 4 or 5 yellow bands, with nothing on them but yellow, not even a streak of black on the edge of the bands, and the hair as yellow and so nearly the color of the bands that one could scarcely tell there was any hair on them—and some call them beautiful bees! Now the idea of a plain yellow bee, or a plain white, or black, or any other one color making a beautiful bee, is not in accordance with my ideas of a beautiful bee. As some one has said, "I want a ringed, streaked, striped, and all-color bee," with a beautiful, flashy contrast of color.

My experience with different colors and strains of bees is, that the *very* yellow ones do not cap their honey white. I had one colony in particular the past season that did the worst capping I ever saw; it was not fit to put on the market at all, as the capping looked as if completely water-soaked. They build too many burr-combs, make too much use of propolis, are not quiet enough, and some strains are too small.

As to Albino's, as a strain, by most breeders they are rather too small, and have not yellow enough left on them; but they have more good qualities than the very yellow bees; they cap their combs whiter, but many of them are too much inclined to build burr-combs.

My experiments show that neither an extreme, of white, yellow or black in a strain of bees, gives the best results as to good qualities. I have found that bees possessing the most good points have all the colors above-named, beautifully combined. The hair is light-colored, the first three bands orange to light orange color, with a fine line of rich, glossy black on their edge, and the last three bands a glossy black, with white rings of hair. Bees with such markings are always, so far as I have observed, very large, prolific and quiet, and are certainly very beautiful, and possess more good qualities than any other color or markings that I have ever experimented with.

About seven years ago I noticed early in February, that I had a colony of bees that were wintering remarkably well, and were breeding up ahead of any I had in my apiary, and it proved to be the best I had that season. Sometime in June a particular friend of mine wanted a good colony of bees, and I told him he should have something *good*. I sold him a nucleus colony containing this queen. The next spring I examined them, and found they had wintered *exceedingly* well, and was a most powerful colony, and they went ahead of any with which I was acquainted that season. I have looked after these bees every season since, and find them the same every spring.

Seeing the great superiority of these bees, I secured an interest in them two years ago, and have been looking after them pretty closely ever since, and find they possess the markings, to a great degree, that I have heretofore mentioned, and I have further improved them this season. They are located about nine miles from where I live, and have been in the same place the past seven years. The past spring I did not get to go to see them until late in May, and as the fruit and all spring blooms were a failure here this season, and my own and other bees were generally weak, I expected to find them in poor condition, but I was pleasantly surprised to find them in splendid condition, being very strong; one colony, in particular, I think was the strongest I ever saw, and it also had the finest markings, and although this was a very poor honey season here, as well as in many other places, yet this colony outstripped any of mine or my neighber's bees, with which I was acquainted.

I noticed the burr-comb matter with this colony, and although there were several $\frac{3}{8}$-inch bee-spaces in the hive during the honey season, I think that all the burr-combs could have been pressed into a thimble. I called the attention of several bee-keepers to this fact, and they expressed great surprise at the absence of them.

I have further improved the markings of these bees this season, and I am going to introduce them into my apiary next season, without any hopes of ever getting a better strain of bees. They cap their honey as white, and enter the sections the most readily of any bees I ever saw, blacks not excepted.

I have often noticed that bees with these particular markings possess more good qualities than any other, and the more they run to the extreme of very yellow, or very white or black, the less good qualities they possess. I think that this breeding for extremes of any color by our queen-breeders is a great mistake. I am well satisfied that it results in deterioration in size, as well as in many other good qualities, and is a failure in getting a beautiful bee.

This strain of mine, which I am going to christen the "American Italian," possesses in a high degree the markings and characteristics of my ideal bee.

MARKINGS FOR BEST CHARACTERISTICS.

For the benefit of those wishing to experiment on this line of color, I will give the particular markings that I have found to give the best characteristics, as well as great beauty:

The three yellow bands should be orange color—not too dark, but rather light, yet not too light; these bands should not be *all* yellow, as is the case with many of the golden Italians, but should have a fine line of glossy black on their outer edge.

The fourth band on many of the bees show slight traces of yellow on their sides, extending and gradually lessening until on the top there is none to be seen, and this is as much yellow as any bee should have on the fourth band, in my opinion, to possess the most good qualities; the rest of this band is a deep, glossy black, with a large ring of light-colored hair. The fifth and sixth bands are of this same glossy black, with the light ring of hair on the fifth.

I find that bees with these markings are large, very prolific, and possess all the desirable qualities of a perfect bee. In short, they have great wintering qualities, are very large, prolific, quiet and beautiful, enter the sections readily, are *not* excessive swarmers, not disposed to use an excess of propolis, build few burr-combs, and are as fine comb-builders as I ever saw, capping their honey very white.

I would like to hear from others, on this color question in bees. Do not understand me as saying that these particular colors combined are *the* cause for these superior qualities—I only mean to say that I have observed that bees *with* these markings seem to possess these qualities in a marked degree, and this strain that I have had under my observation for the past seven years, having *always* gone ahead of my own bees that have been made up from all the noted strains of this continent, of all extremes of color, only goes to prove to me that there *must* be something in a proper combination of these three colors.

This matter of a proper combination of colors, as "indicating character," in the qualities of bees, I think has not been thought of much, and I am led to believe that it is a very important factor in arriving at a good strain of bees. I think that if it was properly understood, an expert could judge from the color and markings of bees, as to their characteristics, and good or bad qualities.

Greene Co., Pa.

GOLDEN-ROD.

Some of the Different Varieties Described.

Written for the American Bee Journal

BY D. E. LEACH.

The following from the Grand Traverse *Herald*, of Traverse City, Mich., touches on the golden-rod question:

> The National Flower, the beautiful golden-rod, which covers thousands of acres of the sand plains in the immediate vicinity of Walton, is no longer
>
> "Born to blush unseen,
> And waste its fragrance on the desert air."
>
> Mr. Carver, of Manton, who is the owner of 180 colonies of bees, is removing them temporarily to Walton, to give them the benefit of the nectar-yielding golden-rod. A weighing test, made last week on a couple of colonies, showed that there was "money in it" as well as honey. And now "from early morn to dewy eve,"
>
> "How doth the little, busy bee
> Improve each shining hour,
> And gather honey all the day
> From "—golden-rod!
>
> These busy little Italians are domiciled in Mr. Leach's enclosure, and are working as if for dear life.

We have at least three varieties of golden-rod growing on "stump-lands" and pine plains of this region. One variety is in bloom all through the month of August; it appears to secrete very little honey, as bees are seldom seen on it.

A second variety, which blossoms about Sept. 1, is very abundant, over thousands of acres. It is an excellent honey-plant, as every one can testify who has bees in this vicinity. Nearly 200 colonies of bees, near my house, are busy on it, whenever the weather permits. This variety is now at its prime, but will last through the month.

A third variety, which begins to bloom about Sept. 10, seems to be even more satisfactory to the bees, than is number two—but not very plentiful.

Walton, Mich., Sept. 23, 1890.

MICHIGAN.

Report of the Ionia County Bee-Keepers' Convention.

Written for the American Bee Journal

BY HARMON SMITH.

The regular fall session of the Ionia County Bee-Keepers' Association was held in Justice Curry's office, in Ionia, Mich., on Wednesday, Sept. 10, 1890, with President A. H. Hall in the chair. Harmon Smith, Secretary, read the following compilation of reports from the 15 members present: 547 colonies, spring count; 533 colonies, fall count; 1,977 pounds of comb honey (report last year, 23,760 pounds); 238 pounds of extracted honey (last year, 5,470 pounds); 84 pounds of wax. Many members found it necessary to feed their bees.

FOUL BROOD CURES.

The first topic discussed was "Bee-Diseases, their Prevention and Cure," and was mainly upon "Foul Brood." Secretary Smith gave a description of the disease and the effect of the different acid treatments recommended as palliative remedies, the McLain plan almost curing infected colonies. He concluded by recommending what is known as Jones' process, but given by Father Langstroth in his work on "The Honey-Bee," as the cure recommended by a German apiarist. The process is described as follows:

"Drive out the bees into a clean hive, and shut them in a dark place without food for 24 or 48 hours. Prepare a clean hive properly fitted with comb (preferably clean frames with foundation) from healthy colonies. Transfer the bees into it, and confine them two days longer with pure honey."

Darius Roop gave an account of the Muth treatment and urged the importance of the most radical efforts to stamp out the disease.

On motion, the President was appointed to confer with the Probate Judge relative to the appointment of a commissioner whose duty it should be to make an effort to eradicate the disease, it being fully comprehended by the association that unless this is done, the destruction of bee-keeping as a business must speedily follow.

President Inman, of the Ionia District Fair Association, invited exhibits, and the convention expressed approval of the suggestion, and urged the members to make a good display.

"Wintering" and "Bee-Pasturage" were discussed. As pasturage, Alsike clover and buckwheat were recommended. Warmth and ventilation, and plenty of well-sealed stores were recomended as requirements for successful wintering.

The association voted to secure suitable quarters for the spring meeting, and space will be provided for the exhibition of bees, bee-implements and fixtures, and a suitable speaker will be secured for the meeting.

HARMON SMITH, *Sec.*

VENTILATION.

Some Suggestions as to Properly Ventilating Bee-Hives.

Written for the American Bee Journal

ARTHUR T. GOLDSBOROUGH.

Mr. E. G. Slayton, on page 620, says that he bores ¾-inch holes in the hives (sides or ends) as ventilators, and also boasts of being a veteran bee-hunter. Now I should like to ask him, or any one who advocates ventilation other than at the entrance, if in his bee-hunting he ever found a colony with a hole or crevice of any sort leading to their combs, but what was carefully glued up with propolis.

If we would only watch and follow nature more closely, we would not preach so much positive error. I assert right here, that any means of ventilating a bee-hive ever invented, or likely to be, defeats the very object aimed at; and, also, that an aperture, say ¼ inch high and 3 inches long is an opening enough, with the rest of the hive hermetically sealed, for the welfare of any colony of bees ever ruled by one queen. Now for the proof:

Take a box, say a foot square, and have it as air-tight as bees would make it (if in mercy left alone). Have but one opening—an inch by an eighth would do; now exhaust the air at the mouth of this entrance (as the bees always do when required), and *all* the air in this air-chamber (hive) is set in motion; the fresh air going in and the foul air coming out of the same opening at the same time. Does it not seem evident that if there is the slightest crack in the hive, the air, instead of being set in motion in every part of it, will draw straight as possible from this crack, making a draught (bad), and leaving the rest of the hive full of still air?

The bees are not slow to correct this state of things, and glue the crack up, but these holes, bored I care not how or when, are too large for them to fill up, and the natural laws of the hive are interfered with. It is folly to argue that bees stop these crevices out of fear of enemies. Cold air is their greatest enemy, winter or summer. Bees in a state of nature always seek sufficient protection from the sun, and no heat is likely to come near them that they cannot displace.

It ought not to be necessary to make a diagram to explain what I have asserted. I only marvel that men like Mr. Doolittle, Mr. Root, and others, have not come out in a flat-footed way on this subject.

Now, if I take an empty hive, light a candle and put it inside, have a small entrance below, and the hive with no ventilating cracks or holes above, the heat, I grant, would become very great, and as heat ascends these two holes bored up in the ends would allow it to pass out, and cool air would come in below, establishing air-currents or ventilation; but this is not the condition of a bee-hive when filled with bees and comb, and the fatal mistake is in believing it so.

I hereby maintain, as far as I know for the first time in print, that any opening in a hive except at the entrance is folly, and the person who would attempt it, ought to buy shoes and stockings for their ducks and geese, for they need them about as much as bees need holes, cracks and big air-spaces.

Washington, D. C.

NEBRASKA.

Honey Exhibit and Premiums at the State Fair.

Written for the American Bee Journal

BY J. N. HEATER.

The honey exhibit at the State Fair held at Lincoln, Nebr., was a fine one and Superintendent E. Whitcomb, of Friend, Nebr., is to be congratulated for getting up so good an exhibit with so light a crop. Our large Bee and Honey Hall was reasonably well filled, and the different exhibits were beautifully arranged, and called forth much praise from the crowds of visitors who thronged the hall from early morn till late at evening.

The following is a list of premiums received:

Best and largest display of bees, comb and extracted honey, and apiarian supplies, Mrs. J. N. Heater; second best, M. Tower.

Best comb honey, basswood or white clover, Mrs. J. M. Young; second best, Mr. Lee.

Best extracted honey, basswood or white clover, August Davidson.

Best fall honey, Mrs. J. N. Heater; second best fall honey, August Davidson.

Best fall extracted honey, August Davidson; second best, A. C. Tyrrel.

Best granulated honey, August Davidson; second best granulated, Mrs. E. Whitcomb.

Best exhibit of brood-chamber and surplus comb foundation, full to partly drawn, Mrs. J. N. Heater; second best, M. Tower.

Best exhibit of apiarian supplies and implements, Mrs. J. N. Heater; second best, M. Tower.

Best display of honey in marketable shape, Mrs. J. N. Heater; second best, August Davidson.

Best display of candy and sweets, J. P. Antill; second best, Larsh Bros.

Best honey-vinegar, Mrs. J. N. Heater.

Best display of bees and queens, Mrs. J. N. Heater, second best, August Davidson.

Best exhibit of extracted honey, Mrs. J. N. Heater; second best, Miss Lillian Trester.

Best honey-extractor, actual test, Mrs. J. N. Heater; second best, M. Tower.

Best all-purpose single-walled hive, M. Tower; second best, Mrs. J. N. Heater.

Best all-purpose chaff hive, Mrs. J. N. Heater.

Best bee-smoker, M. Tower.

Best and largest Nebraska display of bees, honey and supplies, Mrs. J. N. Heater; second best, M. Tower.

On the evening of Sept. 10, the State Bee-Keepers' Association met in convention at the Bee and Honey Hall on the Fair Ground, with President Muir in the chair, and a full attendance of officers of the Association, and over 40 members present.

Reports from 32 different localities, covering the entire State, showed that bees did poorly until about Aug. 15, since which time enough honey has been gathered to supply the bees until honey comes next year. A few report a little surplus from basswood and white clover, and nearly all a light crop of fall honey. Probably the entire crop will not exceed 10 pounds per colony, spring count.

Secretary J. N. Heater and A. C. Tyrrel were selected as a committee to make arrangements for a display of honey in connection with our State display, at the World's Fair, in Chicago, 1893.

J. N. HEATER, *Sec.*

GRAPES.

The Raisin Crop of California, and Bees.

Written for the American Bee Journal

BY E. F. KABEL.

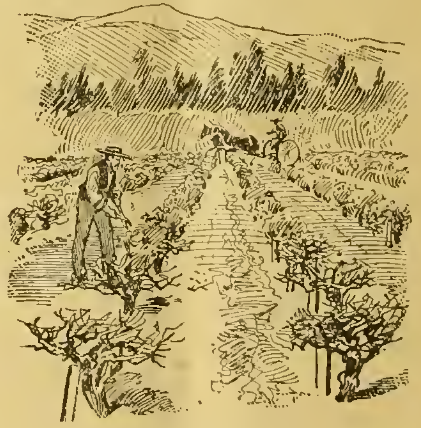
Since so much has been said about the bees interfering with the raisin crop in California, it will be interesting to the readers of the AMERICAN BEE JOURNAL to know more about the vineyards of that region of our fair country.

The bees were there first, and had the right of precedence; the raisins followed, and the growers conspired to expel the bees, but failed to carry their point.

There is no reason why both pursuits should not work harmoniously, by each being carefully conducted.

I will now give some of the particulars about the vineyards, and the crop for the present season.

Just now there is a great bustle and an unusual activity among the vineyards of southern California devoted to the growing of the grape for raisins. The white clusters of plump fruit, rich in saccharine matter, are being picked.

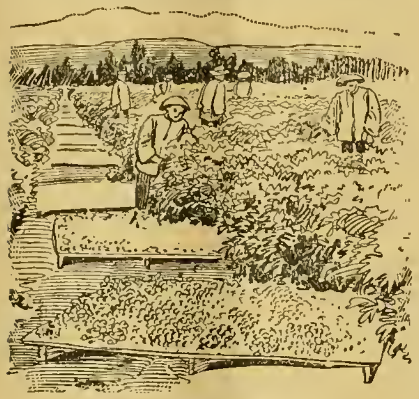


CULTIVATING A VINEYARD.

In the east the product is seen, tempting in its brown wealth of delicious sweetness, nestling enticingly in a bed of laced and embellished paper; but at the vineyard the interest attaches mainly to the progress of the grape toward perfection and the garnering and packing of the fruit.

Almost every visitor from the "effete east," as the acclimated and often recently imported Californian is pleased to call the sections beyond the "Father of Waters," accustomed as he is to the stakes and trellis work of home fields, against which the vines are carefully trained, is struck by the peculiarity of the California vineyards. There are no vines climbing skyward, or disporting in fanciful designs against arbors and lattices. All are cut low, rising not over four or five feet above the ground.

When a vineyard is laid out the main idea of accessibility and convenience in cultivating and picking the fruit is borne in mind. For this reason the cuttings or slips from older vines are planted eight feet apart, or 680 to the acre. This is the usual distance, though occasionally a broader space is left for convenience in driving through the vineyard.



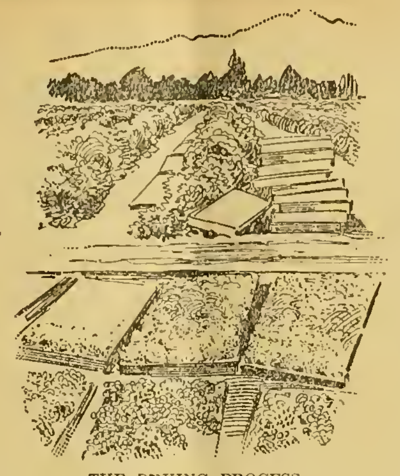
PICKING THE GRAPES.

The cultivating of the ground and the pruning of the vines to insure strength and stockiness are in no way different from the processes familiar to the horticulturist of the east. The interest centers mainly in the mode of preparing the grapes to figure as California raisins on the table.

When the grape has attained that degree of ripeness which indicates that picking time has come the vine grower gets together his help, if he is going to see the thing through himself, or sells the fruit as it stands to one of the big packing companies. Large crews of men, women and children, often Chinese or Mexicans, are engaged, and as the sun rises they begin their day's work. A sharp knife or shears separates the bunches of fruit from the vine. Shallow wooden trays of a size to be handled easily are at hand, and into these the clusters are placed very tenderly to avoid bruising. When the tray is full it is carried to the drying ground.

In southern California at this time of the year there is almost perpetual sunshine, and no necessity exists for artificial heat in the drying process. The filled trays are placed in long rows in open spaces where the sun has free access, and at the end of twenty days the product is dried grapes, which command a comparatively small price in the market. In many vineyards the trays, after being filled one bunch deep, are leaned against the vines and there allowed to dry, the perfection of simplicity in the curing process.

The trays are then taken to the packing house. There the shrunken clusters are emptied into large sweating boxes holding from 100 to 200 pounds each. The grapes are in this manner deprived of all moisture. Next comes the grading of the raisins according to commercial value. The larger the clusters and the individual grapes the better the price. Suitable boxes or forms, calculated to hold about five pounds each, are filled with carefully selected bunches and placed under heavy pressure, which compresses the grapes into layers. Four of these layers, held together by interlocking stems, are ranged one above the other in a pine box, wrapped in gilt and colored paper with a laced covering bearing the brand and the packer's name, and enter the trade as "twenty pounds net."



THE DRYING PROCESS.

"London layers"—the highest class and which bring a fancy price—are the result of the first selection. In sorting a great many of the large berries fall from the stems. These are carefully gathered up, run through a fanning mill, thoroughly cleaned and are then marketed as "loose Muscatels." They are in every respect as good as the layer raisins, but bring a slightly lower price. The smaller clusters are packed less expensively, and are sold under various names. "Muscatels" is the common designation given them. The smallest grade is known as "seedless Muscatels," from the fact that the half grown grapes of this class contain no seeds.

The white Muscat grape is the standard variety grown for raisins.

"What are the profits of raisin growing?" is one of the first questions asked by the newcomer. The necessary land secured, there is quite a healthy margin of profit. Cuttings usually cost about $2.50 a thousand, but 1-year-old rooted vines, with which a more uniform and satisfactory stand can be obtained, can be had for $10 to $12. An acre vineyard twenty months old from the cuttings has produced a crop that sold for $170 when made into raisins.

An acre vineyard six years of age produced thirteen and a half tons of grapes, that were sold for $30 per ton on the vine, yielding $405. But these were exceptional. In Riverside, where the conditions are admittedly favorable for raisin culture, the price realized by the grower for the grapes upon the vine from vineyards four years old and over, and suitably cared for, varies with the seasons and ranges from $100 to $150 per acre. A number of grape growers who have packed and sold their own raisins have realized for several years past from $200 to $225 per acre net. The increase of the raisin industry is shown by the fact that in 1879 the first shipments amounted to only 30,000 boxes, while in 1889 they exceeded 300,000 boxes.

This year the crop will not be so heavy, as a fungus in the Santa Anna and San Gabriel valleys has given the vines a set back, but next season many young vines will come into bearing, and if the transportation question can be modified so as to enable the California grower to compete with the producers of southern Europe, California will be in a position to supply the markets of the country with a high grade of raisins.

Pasadena, Calif.

QUEENS.

A Sure Method of Introducing New Queen-Bees.

Written for the American Bee Journal

BY E. L. PRATT.

When the queen arrives in a Perfection cage, remove the thin lid from over the screen-cloth, and place her as she is received (if in good condition) on top of the frames of some strong colony, wire down, where she will remain quietly until wanted. Make sure that the bees of this hive cannot get at the provision candy that is in the cage, because it will be needed to introduce the queen with.

Now go to a colony that is known to be in a normal condition, with a laying queen. Remove the queen from this hive, and cage or kill her. Leave the bees in this queenless condition from 36 to 48 hours—not over 72.

Now remove the queen from off the tops of the frames of the strong colony, where she was left in solitude, and draw the plug so as to expose the provision candy. Immediately place her with the queenless colony in such a way that the bees of the hive can tunnel through and release the queen.

Examine in a week, and you will find the new queen "safe and sound," doing duty as the mother of that colony.

If the cage is well provisioned, you will be successful *every time*, and it is not necessary to clip off queen-cells, or shake the bees from the combs, or to cage the poor things. The secret is, letting the bees entirely alone after putting in the strange queen. Try it, and see for yourself.

Marlboro, Mass.

EXPERIMENT.

"Feeding Back"—in Order to Obtain Comb Honey.

Written for the American Bee Journal

BY C. W. DAYTON.

The experiment which I am about to describe, was made in order to determine the feasibility of feeding back honey already gathered, when the Queen-Restrictor is employed.

My Queen-Restrictor may be adapted to contain any number of brood-frames, but the one used in this experiment contained only one frame. The Queen-Restrictor to contain one frame consists of the frame and perforated sheets of zinc, so prepared and attached together as to confine the queen upon one brood-comb, and no more, while the worker-bees may pass unrestrained. A reversing device is also provided, so that the Restrictor may be reversed to cause the destruction of queen-cells.

Having previously prepared the Restrictor, as described, on July 8, I went to a prosperous colony occupying a 10-frame hive. At first this colony, with the hive, was removed from the stand a little to one side, and an empty hive placed on the stand instead. Then one of the straightest, best-filled combs of brood was selected and transferred from its frame into the frame in the Restrictor, and the queen hunted up and placed upon it, and then all placed in the center of the empty hive. The vacant space on either side of the Restrictor was filled with wide-frames of sections, after which the remaining combs were taken from the colony and the bees shaken before the new hive, which they readily entered, to join the queen. These combs being rendered destitute of bees were given to a nucleus. There, also, was placed on the top of the new hive, a super of 21 sections.

The wide-frames held 24 sections, making in all 45 4¼x4¼x7-to-the-foot sections, to the colony. Separators were used and the sections were filled nearly full of newly made foundation measuring about 10½ feet to the pound. This completed the arrangement of the hive.

Everything being ready, a large, shallow, slatted feeder, exactly the size of the bottom of the hive, was placed under the hive in place of the bottom-board and the colony fed all the honey it would take from the bee-feeder.

At the start, from 3 to 4 pounds a day was taken, and after 4 or 5 days the amount increased to 7 to 12 pounds per day, which was supplied to the feeder twice a day, 6 pounds to a feed.

On July 15, the sections were examined and 40 sections of comb honey removed, and 40 sections filled with foundation, as before, put in their places, and the feeding continued.

On July 21, 31 finished sections were taken; on July 26, 30; on July 30, 17; after which, the surplus space being full of sections, the experiment was drawn to a close by feeding until the sections were all finished, which was on August 10, and all the sections removed.

After weighing, it was found that there were 163 sections weighing, on the average, a trifle over 14 ounces, and they cost 236 pounds of honey. Figuring comb honey at 15 cents a section, it is $24.45. Figuring honey at 7 cents in barrels, it equals $16.52, or a difference of $7.93, not considering the cost of foundation and sections. A part of this honey was sold at 15 cents a section.

It was noticeable of these sections, that they were, without exception, built out true and filled with honey clear to the wood. What propolis there was (and there was very little) appeared to be white wax; the bees having not much use for wax, they seemed to use it in place of glue.

Several other colonies were experimented with, more or less like the one described, and the amount of food required to perfect 50 14-ounce sections, always fell below 80 pounds; and in one trial, 50 sections were completed on less than 72 pounds of food.

This experiment was made in behalf of necessity. I have studied much to find a device or system that would prevent such large quantities of brood being reared during the harvest, and I have found it in restraining the queen from laying at certain seasons. In short, to contract the brood-nest without changing the usual hive space.

It is my belief that there are queens prolific enough to maintain 10 combs full of brood, up to the close of the honey harvest, when the brood cannot but hatch out a set of something like 50,000 idle boarders. All the bees that hatch in the 10 days preceding the end of the harvest, are useless also. These two numbers equal 75,000 bees. Reckoning 7,000 bees to a pound, we have 10½ pounds. Calling a pound of bees equivalent to 3 pounds of honey, and the time and labor of the old bees in caring for the bees, 2 pounds, it reaching a total equivalent of 52½ pounds of honey, which is worse than lost. The most of those colonies which are not ready to swarm before the harvest, are found to have the largest amounts of hatching brood in their hives, at and near the end of the harvest, when there is no honey for them to gather.

The aim of my experiments this season has been mostly to find a way to make this large number of unseasonable bees profitable.

I am satisfied that, at the present prices of comb and extracted honey, there is a wide margin of profit over the cost of the feed, in feeding back extracted honey to obtain comb honey; and what remains is to ascertain if it will pay for the labor.

It has gone to record many times that 2 or 3 pounds of extracted honey is required to obtain one pound of comb honey, and my faith in that record prevented my experiments in that direction until now.

Clinton, Wis.

SYRIAN BEES.

Their Extra-Prolific Queens not Advantageous.

Written for the American Rural Home

BY G. M. DOOLITTLE.

I see by the papers that some are still puffing the Syrian bees, as just the bees for the "multitude" to keep, one of the reasons which is given for there so thinking, is that of their extra prolificness. To make this idea more emphatic, one writer says all his experience in bee-keeping has tended to make him value prolificness in a queen above all other qualities. He wants them to be so prolific that lots of brood will be reared at all seasons of the year when the weather will permit He wants the hive overflowing with bees in the spring of the year, in the summer, and in the fall as well. Such words as these are a great surprise to me. If he had modified this statement so as to make it read, that he valued the prolificness of a queen above all other qualities, when it could be so regulated that such prolificness would be of the greatest profit to the bee-keeper, I would hold up both hands for it; but when he writes that he regards the prolificness in a queen at all times of the year above all other qualities, the printer either made him say what he did not intend to, or else he is very much mistaken. Here, where we have but about 6 weeks during the whole season in which the bees make any gain in honey, what we want is a queen that can be coaxed to fill the hive to over-flowing with brood during a few weeks previous to this honey harvest, and lay just as few eggs at all other times as is consistent with accomplishing the above object.

If the writer of the above had a piece of work which he must accomplish at a certain time if he was to receive any profit therefrom, he would hire his help before that time expired or not at all. If he wished "help" at a certain time, and they did not come until too late, surely he would not keep and board them 6 or 8 months because it was not convenient for them to come sooner. Oh, no, he would tell them that he did not want them, for it was too late. So I say, that when he says that he wants the hive over-flowing with bees in the fall, only to consume honey during the winter and die before the next honey harvest comes, there must be a mistake somewhere.

Why I prefer the Italian bees to all others, is for the reason that they are more susceptible of being handled so as to get the hive over-flowing with bees at the right time, than are the bees of any other race. Also, that as soon as the honey harvest arrives, the queen will cease her prolificness, and thus we do not have a lot of "hungry hands" to board, when they are of no use to the apiarist. To show that I am not alone in this, I will quote the following from one of our largest honey producers, who a few years ago was quite a prominent writer for the various bee-papers: "I get very much the best results from my purest and most yellow Italians. The Italians seem to be much more disposed to partially stop brood-rearing, and bend all their energies to honey-gathering whenever there is a heavy flow of nectar, than any other kind of bees which I have tried, and this is a very great advantage."

That the Syrian bees cannot be managed so as to get a large amount of brood at any other time, save in a heavy flow of honey, is one of the worst faults that any race of bees can possess; for an extra amount of brood during the honey yield, always means a multitude of mouths to feed after the honey harvest is past.

I tried the Syrian bees with the only hope that they would prove better than the bees which I already had, but when I found out that I could not coax the queens of this race to lay eggs rapidly except in the honey harvest, I saw that it would be an impossibility for them to give a large yield of honey. After doing my very best with them the second year, thinking that I might not have fully understood them at first, I was obliged to record only 50 pounds of honey from the 6 colonies which I had, while I had to feed them a large amount to get them prepared for winter, taking combs of sealed honey from the Italians to do the feeding with, while the same number of Italian colonies gave over 500 pounds of surplus during the same time and with the same management.

The Syrian bees would increase but little till the honey harvest arrived, when they would crowd every available cell with brood, which brood would use up nearly all the honey the few workers reared before, could gather while the honey harvest lasted. On the contrary, when the honey harvest opened, the Italians would have a hive over-flowing with bees and every comb filled with brood, and this brood would gradually decrease till at the end of the harvest I had lots of honey and but few mouths to feed.

Here is an item which many bee-keepers seem to overlook in following their profession. Bees are only of value when they come in time to take advantage of the honey flow, and whether through the race of bees or the carelessness of the apiarist we fail in this point, little profit, or none at all, is sure to be the result.

Then again, these Syrian bees are subject to the laying-worker nuisance to a greater degree than any of the other races, which in my estimation is a fault of itself great enough to warrant us in not keeping them, if they were as good as the other races of bees in all other respects. Every time a change of queens is made, these laying workers fill the cells with eggs so that the combs are filled with drone brood before the young queens get to laying, so that they have little room in which to deposit eggs after they become fertile, while these useless drones require much honey in their rearing and afterward; besides, drones in worker comb does not leave the comb in very good shape for after-using.

Borodino, N. Y.

SELECTIONS FROM OUR LETTER BOX

Honey, Birds and Flowers.

We have had one of the best honey-flows I ever saw in this section. Spring opened early, and swarms began to issue in March, and continued until July. I have 150 colonies in Simplicity and dovetailed hives. I worked about 40 colonies for extracted honey, and the rest for comb honey, in one-pound sections. I have some of the finest comb honey I ever saw, gathered from horse-mint and sour-wood. I am selling it without any trouble in the home market. Fall flowers are beginning to yield honey now, and they look promising for a good crop. This is one of the pleasantest climates to live in—so many birds and flowers. WILLIE DOUGLASS.

Lexington, Texas, Sept. 22, 1890.

Bee-Keeping in Florida, etc.

We have 1,300 colonies of mostly Italian bees, and have taken only 13 barrels of a very poor quality of honey, and fear that we will have to buy sugar for them, as there is no honey here. What is the best way to prepare sugar for feeding them? There are over 2,330 colonies of bees in this neigborhood, and all failed to gather honey. There was lots of bloom, but it failed to secrete any nectar. The cold wave in the spring was the cause; the bloom seemed to be dwarfed. We had great hopes of a fall flow, to feed the bees, but it rains every day, so things look gloomy; but we must not let the bees starve. We can only hope for a good flow next season, and good prices. It will not do to be discouraged. We must examine every colony, and see that they have a good living, which will be 35 or 40 pounds each, as our bees commenced to get their living about the first of February, from the orange bloom, maple and other swamp blooms.

At one of our apiaries the bears made several raids. We killed two of them, and shot one more; two others we did not get to shoot, but they have taken warning, and left. They are great lovers of honey, even risking being shot for it. The last one that came was shot about eight times before she got enough of it. We hope that she will stay in the swamps and let the bees alone, as she is a bad "apiarist." She would take up a hive and carry it eight or ten steps from the bench, then take off the cover, and eat all of the honey, and scatter all the brood on the ground. She would take three to four hives every night, and destroyed 20 or more colonies, as no one was living at the apiary. ALDERMAN & ROBERTS.

Wewahitchka, Fla., Sept. 15, 1890.

Bees in Fine Condition.

My bees did very well, considering the poor season. I obtained 309 pounds from 4 colonies, spring count, and the bees are in fine condition for winter.

Jennings, Mich. W. H. FOWLER.

Small Crop of Honey.

This has been the poorest season for honey since I have kept bees. My average is 3 pounds to the colony, spring count—all from linden bloom. I had 2 colonies that I wished to break up, and I killed their queens in July, and afterwards destroyed all the queen-cells, and I thought that they were hopelessly queenless, but about Sept. 1, I found brood in both hives, in all stages. Now will some one please tell me where they got their queens? JESSE WHITE.

Perry, Iowa, Sept. 20, 1890.

Bee-Keeping in Mississippi.

Bees are as busy bringing in honey and pollen now as I ever saw them, and it is nearly all from golden-rod, but some of it from other flowers. We are glad to have a flow from some source or other, for our bees needed it, and right badly too. About two weeks ago some colonies did not have 5 pounds of honey; to-day they have about 25 pounds—enough to winter on, and save feeding—a thing which I once thought I would have to do. Some of my Italian bees have stored from 10 to 15 pounds of surplus comb honey within the last week, and I think they will give me at least 25 pounds before they stop. I said last year that I did not think that golden-rod yielded much honey, but I will change now, and say that it does yield, and abundantly—at least in some seasons. I reared a fine lot of Italian queens this year, and now have but one colony of black bees, a few hybrids, and the balance pure Italians. There is no surplus honey of any account here. W. R. TATE.

Goodman, Miss., Sept. 26, 1890.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

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HONEY AND BEESWAX MARKET.

DENVER, Sept. 15.—We quote: 1-lbs., first grade, 16@18c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Sept. 27. We quote best white clover 1-lbs. at 16@18c. Extracted, 7@9c. per lb. Beeswax, 28c.
BLAKE & RIPLEY, 57 Chatham Street.

NEW YORK, Sept. 12.—Honey is in excellent demand, and finds ready sale at the following prices: Fancy white 1-lbs., 16@18c; same, 2-lbs., 14@15c; off-grades, 1-lbs., 13@15c; same, 2-lbs., 12@13c; buckwheat, 1-lbs., 11@12c; same, 2-lbs., 10@11c. Extracted, clover and basswood, 8c; buckwheat, 6c; California, 6¾@7c. HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Sept. 10.—Honey has sold well of late, despite the higher range of prices—17@18c being the value of white comb in 1-pound sections, and sells upon arrival; the weather being cool, a brisk trade is now being experienced. Extracted also sells quickly at 7@8c in barrels and cases. Supply fair.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Sept. 20.—Demand for comb honey continues good, but supply light. We quote: Choice white 1-lbs., 16@18c.; light 1-lbs., 14@16c.; dark 1-lbs., 10@12c. Extracted white, 6@7c.; dark, 5@6c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Sept. 10.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 11.—Demand for comb honey is larger than the receipts. We quote: White 1-lbs., 16c.; 2-lbs., 14c. Dark 1-lbs. 13c.; 2-lbs., 12c. Extracted, white, 7c.; dark, 5@6c. No beeswax on the market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 10.—Comb honey is selling at 14@16c; very little in the market. Extracted, 7@8c. Beeswax, 26c for good.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, Sept. 22.—Demand is good for all kinds of honey. The arrivals are fair. We quote: Choice comb, 14@16c.; extracted, 5½@8c.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

◆

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Society, will meet on Oct. 8, 1890, at the residence of E. France, Platteville, Wis. B. RICE, Sec.

☞ The annual meeting of the Union Bee-Keepers' Association, will be held at Hamilton, Ills., on Oct. 10 and 11, 1890. A good time is anticipated.
DANIEL SHANK, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The next meeting of the York and Cumberland Bee-Keepers' Association, will be held at Goodwin's Mills, Me., on Oct. 18, 1890. All persons interested are invited. C. W. COSTELLOW, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. FEHR, Sec.

☞ The Missouri State Bee-Keepers' Association will meet at Mexico, Mo., on Oct. 22 and 23, 1890. A good programme, and an instructive and interesting time are expected. All are invited to attend. Board can be obtained for 75 cts. per day, or 20 cts. a meal.
J. W. ROUSE, Sec., Mexico, Mo.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

CATARRH.
CATARRHAL DEAFNESS—HAY FEVER.
A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

◆

Trial Subscribers.—In order to get as many as possible to read the AMERICAN BEE JOURNAL, we will take Trial Subscribers from the time the subscription is received until the end of 1890 for 25 cents each. Or for any one sending us $1.00 for 1891, we will give the numbers for this year *free* from the time the subscription is received at this office—so the sooner they subscribe the more they will get for the money.

◆

Clubs of 5 New Subscriptions for $4.00. to any addresses. Ten for $7.50.

Advertisements.

Send 25c For my Book of Discovery and Invention, **The Queen Restrictor** Address,
C. W. DAYTON, - Clinton, Wis.
Mention the American Bee Journal.

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For Sale! 25,000 pounds of the very **Finest COMB HONEY,** in seant 1-lb. Sections, put up in white Basswood Cases holding 12 Sections—glass on one side of the Cases, showing off the honey nicely. A very fancy lot. The price is **20 cents per pound** on board the cars here. Who wants the lot?

L. W. BALDWIN & SON,
40Atf INDEPENDENCE, MO.
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GROUND CORK
FOR
Packing Bees for Winter.

THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.
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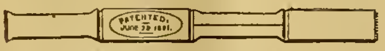
MANUFACTURERS OF THE
"BOSS" ONE-PIECE SECTIONS,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WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best.
☞ Write for prices.
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Electrotypes of Engravings.

WE can furnish Electrotypes of all the Engravings used in this JOURNAL or in our Catalogue, at **25 cents** per square inch. If to be sent by mail, add 10 cts. for postage. No single Electrotype sold for less than 25 cts.

Measure from outside points shown, on both length and width of the printed impression.

THOS. G. NEWMAN & SON,
246 East Madison-Street, - - CHICAGO, ILL.
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ELECTRICITY, HOME TREATMENT

ALL PHYSICIANS AGREE that every family should have an ELECTRIC BATTERY in their home. A mild Electrical current will ease the whole body, giving that sweet sleep to the well and tired, as to the invalid suffering from blood and chronic diseases, and who find **night their worst time to rest.** ELECTRICITY will surely relieve and in thousands of cases permanently cure any of the following diseases: Paralysis, Sciatica, Nervousness, Neuralgia, Catarrh, Loss of Voice, Asthma, Malaria, Dyspepsia, Liver Complaint, Constipation, Rheumatism, Diseases of the Kidneys, Female Complaints, Seminal Weakness, Impotence, Varicocele, Hydrocele, Exhausted Vitality, resulting from ignorance, Overtaxation, unfitting the victim for work, business, or the social and other relations of mankind. The Battery is always ready, and can be used at a moment's notice.

By all means use the WILLIAMS' DIAL or PERFECTION BATTERY. The **Dial Battery** is enclosed in a beautifully polished mahogany finished box, 3 in. high, 8 deep and 8 wide. All the interior parts are nickel-plated and finished in the very best style. It gives five different currents. The strength is regulated by the Dial; this shows the quantity of electricity you take. The Battery cannot get out of order, and it is impossible to cause injury in any way. The regular price of the Dial Battery is Twelve Dollars ($12.00), but to introduce it, we will, for the next 90 days, fill orders for this splendid machine at the **wholesale price, $9.00.**

OUR PERFECTION BATTERY, standing 6 inches high, 5 1-2 deep by 5 1-2 wide, is a marvel in beauty and finish, and thoroughly reliable. It gives five different currents. Price, Five Dollars ($5.00). Our Batteries are securely boxed and shipped to any part of the country, on receipt of price. We send C. O. D. on receipt of One Dollar, **subject to full examination at Express Office by your family physician,** if you so desire. Send money by registered letter, post office order, or bank draft.

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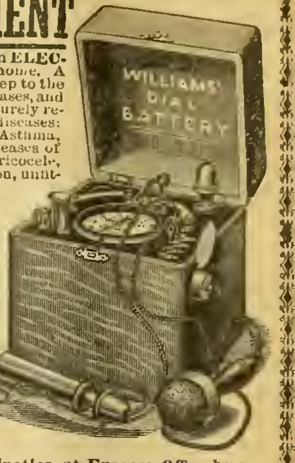
☞ CIRCULARS, GIVING FULL INSTRUCTIONS, SENT ON APPLICATION.



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WITH FULL DIRECTIONS
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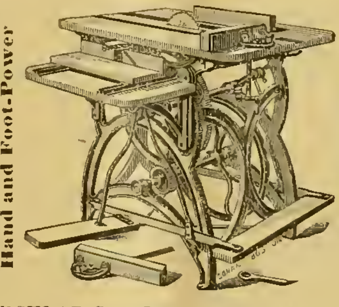

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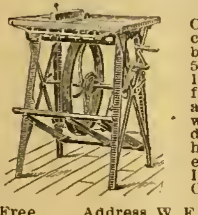

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
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British Bee Journal
AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

SPECIAL DISCOUNT
ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
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Established 1850.
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Satisfaction Guaranteed.
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Mention the American Bee Journal.

THE "REVIEW."
SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

"Marketing," Will be the Special topic of the August number.

The "Review" is Published monthly, at 50 cts. a year. Send for samples (free) and see if you can afford to be without it.

Address Bee-Keepers' Review,
W Z HUTCHINSON, Ed. & Prop Flint, Mich.
23Ctf *Mention the American Bee Journal*

Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.

The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon,..holds 10 lbs ..	$1.80....	$12.00
½-Gallon, holds 5 lbs....	1.50. .	9.00
Quart, holds 3 lbs	1.20...	7.00

The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25. ..	$ 1.50.. .	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

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Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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(Successors to B. J. Miller & Co.)
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BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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HAS NO SAG IN BROOD FRAMES.

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Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

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Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
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AS PRACTICALLY APPLIED;

Being a Method by which **the very best** of **Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

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HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 **cts.** Advice to beginners, Circulars, &c., free.

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SQUARE HONEY CANS

The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.

They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can	....(boxed)	....	$ .45
12 " Cans	... "	....	5.00
100 " "	... "	....	40.00
1 box of two Cans		....	.75
12 boxes	"	....	8.40
100 "	"	....	65.00

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Muth's Honey-Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

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CHARLES F. MUTH & SON,
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P. S.—Send 10c. for Practical Hints to Bee-Keepers.

$3.00 WILL BUY.

☞ I will close out my Apiary of over 100 Colonies of Bees in fine condition, at $3 per Colony—good Colonies, good Hives, with enough honey to winter on. Address,

34A7t **J. A. KING, Mankato, Minn.**

Mention the American Bee Journal.

TAKE NOTICE!

BEFORE placing your Orders for **SUPPLIES,** write for prices on One-Piece Basswood Sections, Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. Address,

R. H. SCHMIDT & CO.,
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Turkeys for Market AND Turkeys for Profit.

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The most profitable Turkey Raiser in America.

Written expressly for those who are interested in Turkeys and wish to make them profitable.

She raised in one year 150 Turkeys doing the work for a family of five—netting her $300. No farming pays so well as turkeys. Farmers' wives and daughters make the best Turkey raisers.

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Save the feathers, they bring good
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Naraganset Turkeys—White Turkeys.
Bronze Turkeys—Common Turkeys.
To restore Chilled Turkeys.
Diseases of Turkeys.
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Mark your Turkeys—Marketing.
Capital and number to begin with
Tells everything about turkey business.

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34Ctf

LOOK HERE!

TESTED Italian Queens, $1.00 each; Untested, 75c.; 12-pound Shipping Cases in flat, per 100, $6.00; 2x9 glass for same, per 100, 70c.; per 500, $3.00. Price-List free.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

Mention the American Bee Journal.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Oct. 11, 1890. No. 41.

Mr. Chas. Dadant and wife passed through Chicago last week on their way home from Northern Wisconsin, where they have been spending a few weeks for *rest* and health. He says he never felt better than now.

◆

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the Bee Journal. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

◆

The Indiana State Fair was a success. The Bee and Honey Show was quite attractive, and the Indianapolis *Sentinel* remarks as follows about a part of the exhibit :

> One of the most instructive displays at the Fair is that shown by Mr. Walter S. Pouder, of this city. He keeps 20 colonies of bees, amounting in all to about 1,000,000 bees. He makes a specialty of honey and beeswax, and keeps a number of fine Italian colonies of bees. If you want to know anything about bees, just call on Mr. Pouder.

◆

An Old Fisherman predicts that we may expect an old-fashioned winter, says the New York *Sun* in a jocular way. This is what it says :

> "It's going to be an old-fashioned winter next winter," said an old fisherman in the market. "It's the first sign of the season, and I look out for it every year. I never knew it to fail. What is it ? Crabs. Plenty of crabs. Bilion's of 'em. The Harlem river is full of crabs, and there's no end of 'em in the Hudson river and the East river, and all the little rivers and creeks where the salt and fresh water mix. What's the reason crabs bring on cold weather ? I never reason, when I know a thing is so."

In Plano, Ills., there lives a bee-keeper who has a block of land 240 feet square, and on it he keeps 70 colonies of bees—the rest of them are in an out-apiary. His name is J. C. Wheeler, and he is a member of the National Bee-Keepers' Union.

Some designing person is circulating a petition to the City Council to have the bees removed, declaring them to be "a nuisance." They are back 75 feet from the street, and are hidden by the residence and an evergreen fence, and cannot be annoying to any one ! It is the work of a mischief-maker ! Nearly all of his nearest neighbors refused to sign the petition, because they knew that the bees did not annoy any one, in the highway.

The Manager of the Bee-Keepers' Union being appealed to, sent copies of the decision of the Supreme Court of Arkansas to the Mayor and Aldermen, and directed Mr. Wheeler how to proceed in case of any further developments.

This will no doubt prevent further trouble, and save annoyance and expense. That Supreme Court decision is a grand document, and knocks out jealous foolishness every time.

◆

Gladly Done.—Mr. Byron Iiams, of Worcester, Mo., sent in one of the first lists of names for Trial Trip subscribers to the Bee Journal. He wrote as follows about them, and we hope that every subscriber who has an interest in the pursuit will emulate his example, and send us a list of bee-keepers, in that locality, who ought to read the Bee Journal. He says :

> Anything that I can do to increase the circulation of, or in any way help to promote the welfare of such a valuable and useful visitor as the American Bee Journal, will be done gladly and cheerfully ; and I think that every reader of the Bee Journal in the United States should send in a list of names. Best wishes for the success of the Journal.

◆

The Children of the land will want to flock to New York next December. A doll-show embracing five thousand beautiful dolls, dressed by the wife of the President, and by other charitable ladies, will be given in that city for the benefit of various charities, by Messrs. Arkell & Harrison, proprietors of "Frank Leslie's Illustrated Newspaper." Prizes of several hundred dollars will be given to the ladies who dress the dolls most stylishly. The dolls are provided free of expense. The details of the scheme are printed in last week's number of "Leslie's."

◆

New Subscribers can have the Bee Journal and the Illustrated Home Journal from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

Mr. G. W. Demaree, of Christiansburg, Ky., has just recovered from a second attack of sciatica, which has been a very severe one. He writes as follows concerning it and his bees :

> For four weeks past my sufferings cannot be described. I had two doctors with me, and at one time it looked as though your sincere friend was done with bees and all earthly things ; but a kind Providence has ordered otherwise. I see that my answers in the Query Department are missing, in the last two or three issues. My sickness has hindered me from returning answers. Our bees are getting some fall honey, when the weather is fair. The fall bloom is good, but the weather is cloudy and dark too much of the time. Fall flowers seem to need sunshine to make them yield nectar. For once in ten years golden-rod is yielding some nectar here.

We are glad that friend Demaree is rallying from his severe illness ; and we feel sure that our readers will welcome his articles and replies in the Bee Journal. His work is not yet done, and we hope he may long remain among us.

◆

A Grateful Spirit and Other Sermons, is the title of a volume of 300 pages, in which are found twenty of the choicest and most eloquent pulpit utterances of the Rev. James Vila Blake, of Chicago. In his "Preface" to the book, the author says : "These Sermons are published because they are asked for. Neither have I chosen the discourses. I have printed those desired by the people. If the request for them means that the Sermons may give help, strength, cheer, comfort, anywhere, I am glad and thankful."

These gems of the pulpit will afford pleasant and profitable reading to all who may be so fortunate as to procure a copy. The book is issued by the "Unity Publishing Company," of Chicago, Ills., at the very low price of $1.00, postpaid.

◆

If a Feeder is not at hand, some seem at a loss to know how to feed the bees. Walter S. Pouder, in the Indiana *Farmer*, gives his method of doing it thus :

> I know of no plan of feeding that is more satisfactory than the following : Tilt the hive back and prop it by placing a board of the proper width under the front of the hive. Now pour the syrup in at the entrance on the bottom-board ; ten pounds may be given at a time, and it should be done in the evening. The following morning the hive may be let down straight, and the bee-keeper can have the combs. After a strong colony has occupied a hive for a time, they will have glued every crevice and joint, so that the hive will not leak. The many advantages of this method will be obvious to the bee-keeper, and I am sure will be greatly appreciated after a trial.

◆

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

The Golden-Rod.

Written for the American Rural Home
BY FRANK DEMPSTER SHERMAN.

Spring is the morning of the year,
And summer is the noontide bright;
The autumn is the evening clear
That comes before the winter's night.

And in the evening, everywhere
Along the roadsides, up and down,
I see the golden torches flare
Like lighted street-lamps in the town.

I think the butterfly and bee,
From distant meadows coming back,
Are quite contented when they see
These lamps along the homeward track.

But those who stay too late get lost;
For when the darkness falls about,
Down every lighted street the Frost
Will go and put the torches out!

GLEAMS OF NEWS.

Bees to Foreign Countries.—In accordance with the advice of the International Bureau of the Universal Postal Union, at Berne, notice has been given by our Postal Department that queen-bees will be admitted to the mails—provided they are packed in wooden boxes, not exceeding 5x2x1½ inches in size, closed by a wire-screen protected by a movable wooden lid; and that postage thereon is prepaid, either at the rate applicable to letters or to samples of merchandise in Postal Union mails. Letter postage is 5 cents per one-half ounce. The postage on merchandise is one cent for each two ounces.

Under the regulations, queen-bees may be so sent to the Argentine Republic, Belgium, Bulgaria, Chili, Colombia, Congo, Dutch West Indies, Egypt, Gautamala, Hayti, Hawaii, India, Italy, Liberia, Mexico, Paraguay, Portugal, and the Portuguese Colonies, Roumania, Siam, Spain, Switzerland, Austro-Hungary, France, Germany, Greece, Luxemburg, the Netherlands, and Dutch Guiana.

Still more recently Costa Rica has been added to the list.

◆

Bi-Sulphide of Carbon is recommended by Prof. A. J. Cook, of the Michigan State Agricultural Experiment Station, as one of the very best insecticides. It has been used with success to destroy the phylloxera on the grape-vines of France; is applied to the destruction of prairie-dogs in the West, and has been used by Prof. Cook with success to destroy ants. A single dose in the habitation of the animal, or in an apartment, is usually sufficient. It is exceedingly volatile, and its vapor reaches everywhere. But it must be used with great care, for the vapor is very inflammable and poisonous; so that a room in which it is used must be well aired before one enters or carries a light into it.

Foul Brood.—The London, England, Daily *News* is credited with the following item, on the Canadian Special Act for the suppression of this terrible disease:

> Pure honey from the hive is regarded by the Legislature of Ontario as sufficiently important to warrant the passing of a special act in the interest of honey-consumers. The object of its regulations, pains, and penalties, however, is not, as might be inferred, the dishonest tradesmen, but the uncleanly bee-keepers.
>
> In brief, the measure is designed to check the progress of the disease of the honey-combs, technically known as "foul brood," which has done mischief in many hives in Europe, and in Canada it has assumed very serious proportions.
>
> It indicates almost a touching faith in the omnipotence of Legislation, that the Ontario Bee-Keepers' Association, after prevailing on the Department of Agriculture to institute a formal inquiry into the subject, has asked for and obtained this Special Act.
>
> It seems, however, well established that the "spores" which infect the honey in the comb, and defy even freezing to the point of 35 degrees below zero to destroy them, are caused by leaving decayed brood in the hives. This practice the Act which has now received the Queen's assent, seems calculated to keep in check.

The *News* gets things mixed in the usual way? The cause of the calamity is first stated to be "unclean bee-keepers"—then it is "disease of the honey-combs"—then the "spores which infect the honey in the comb," are "caused by leaving decaying brood in the hives." The whole thing is just such an admixture of "fact and fancy"—"truth and error"—as we might expect from those who know nothing of the matters they are writing about.

◆

Centuries before the Christian Era peculiar limestones taken from the quarries of Asia and Africa, have been used for rearing magnificent buildings. These quarries are composed of layers made entirely from the tiny shells of microscopic animals. No less than 137 species exist in these limestone beds.

In some places mountains of great height are made of their shells. In Egypt the layers are of such extent that for centuries the rock has been used for building purposes. The ancient pyramids and the Sphinx are made of this rock.

In Germany and France the same limestone rock is used for building. The "St. Nicholas" Magazine says:

Insects are often found preserved in it as perfect as on the day they were imprisoned.

The *first bee* of all the ages was found in amber, "an embalmed corpse in a crystal coffin." With it were found fragments of flower and leaf, as if the resin dropped on the flower upon which *the bee* had alighted and enveloped both.

Thus are the honey-bees identified with the earliest ages of this planet. They no doubt flitted among the flowers of Eden, and gave to Adam and Eve a taste of the sweetness from Nature's laboratory ere they were driven from Paradise, to earn their living by the sweat of their brows.

Bees Control a Train.—A correspondent of the New York *Sun* describes the following incident, where bees were said to have detained a train:

> A swarm of bees created a block in a curious manner on the Perkiomen roailroad the other day. A freight train running between Perkiomen Junction and Allentown, Pa., stopped to take water at Palm station, twenty miles north. A swarm of bees from a neighboring farm house had taken refuge in some woods near by, and when the train stopped at the station they came buzzing out and alighted with one accord on the tender behind the engine.
>
> The engineer and his assistant in the engine and the brakemen standing around the train were astonished at the visitation and promptly sought safety in the waiting room of the station. The fireman, William Heist, was on the engine cab at the time busily shifting coal from one side of the tender to the other, and in an instant a hundred bees set upon him. Half mad with pain he jumped off the tender and rolled wildly in the grass at the roadside.
>
> The schedule time for starting the train came and went, but the crew saw no way in which to start. They held a consultation over the problem, and finally a bright idea struck the engineer. Putting it into execution, he crept softly and unconcernedly up to the tender, after the manner of an experienced bee-keeper, and secured possession of the adjustable hose with which engineers are accustomed to clean up their cabs. He got the drop on the bees, and turned on them a steady stream of cold water. The effect was magical. The entire swarm took to their wings and described a straight line—a bee-line—toward the woods. The train then resumed its journey, fifteen minutes behind time.

This incident shows how a little insect may control the thundering engine, and defy the power of steam.

◆

Convention Notices.

☞ The annual meeting of the Union Bee-Keepers' Association, will be held at Hamilton, Ills., on Oct. 10 and 11, 1890. A good time is anticipated.
DANIEL SHANK, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The next meeting of the York and Cumberland Bee-Keepers' Association, will be held at Goodwin's Mills, Me., on Oct. 18, 1890. All persons interested are invited. C. W. COSTELLOW, Sec.

☞ The fall meeting of the Central Michigan Bee-Keepers' Association, will meet in the Pioneer Rooms, Capitol Building, Lansing, Mich., on Wednesday, Oct. 15, 1890, to commence at 10 a.m.
W. A. BARNES, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. FEHR, Sec.

☞ The Missouri State Bee-Keepers' Association will meet at Mexico, Mo., on Oct. 22 and 23, 1890. A good programme, and an instructive and interesting time are expected. All are invited to attend. Board can be obtained for 75 cts. per day, or 20 cts. a meal.
J. W. ROUSE, Sec., Mexico, Mo.

◆

The International American Bee-Association will meet in Keokuk, Iowa, Oct. 29, 30, and 31. As this is the first meeting west of the Mississippi, in the twenty years of the existence of the Association, a large attendance is expected, especially as our leading publishers and a number of bee-keepers of note will be there. All communications should be addressed to C. P. Dadant, Hamilton, Ills.

QUERIES and REPLIES.

Locating a Queen After Dividing a Colony.

Written for the American Bee Journal

QUERY 733.—If a colony is divided equally, and no queen seen, is there positive evidence to the apiarist by observing, from the outside, which half has the queen? If so, what is it?—T.

Not usually.—G. M. DOOLITTLE.

No; at least no such evidence has been brought to my senses.—J. E. POND.

There is no evidence at all, provided both colonies have eggs and brood.—M. MAHIN.

By the restless and excited appearance of the queenless half. It takes a little practice.—DADANT & SON.

You will notice great uneasiness, especially at evening. The part containing the queen will be quiet.—H. D. CUTTING.

The queenless portion will soon show their agony and despair by being very restless, and running all over the hive, and a plaintive hum can be heard, etc.—P. L. VIALLON.

It can usually be told which has no queen. The bees are uneasy, running around the entrance and up on the front of the hive, as if hunting for something.—A. B. MASON.

Perhaps not positive, but circumstantial. Uneasiness on the part of the queenless one, and quiet contentment on the part of the other.—EUGENE SECOR.

Yes, in half an hour or so the queenless part will become very uneasy, running over the front of the hive as if hunting for something.—C. H. DIBBERN.

The queenless half will show great restlessness and anxiety, while the part that contains the queen will be easy and quiet. My plan would be to examine in a day or two—be certain.—J. P. H. BROWN.

There is. It takes the experienced and practical eye of the apiarist to determine positively, but the ordinary observer will generally notice greater activity in the colony with the queen.—MRS. L. HARRISON.

Not necessarily. They may appear more satisfied. Queenless colonies sometimes are disquieted. I should not like to have the task of deciding.—A. J. COOK.

By watching closely enough you may see signs of discontent and excitement in the queenless part. I should prefer to wait and see which started queen-cells, or was without eggs.—C. C. MILLER.

Yes. In about two or three hours after the division is made many bees of the queenless part may be seen to run out at the entrance and up the sides of the hive, as if in search of something, and they continue their search until queen-cells are started.—G. L. TINKER.

The experienced apiarist may tell to almost a certainty. The queenless colony for sometime after division will be very restless. A loud humming will be heard inside the hive, and the bees will keep up a search outside, running back and forth on the front of the hive, and around its sides.—R. L. TAYLOR.

Yes, sir. The half that has the queen will be quiet and contented, while the other half will all run around wild and excited, within an hour, after being hived without a queen; that is, a swarm will. A colony may be divided, and the queenless half will not act that way, provided they have plenty of young brood, out of which they can at any time rear a queen. Perhaps you have confused the word "colony" and the word "swarm."—JAMES HEDDON.

The restlessness and uneasy condition of the bees will indicate the queenless part of the divided colony. These signs of discontent may be easily recognized by all—and the experienced eye will detect it instantly.—THE EDITOR.

CORRESPONDENCE.

SEASON OF 1890.

Work in the Apiary—Feeding Back Honey, etc.

Written for the American Bee Journal

BY G. W. DEMAREE.

The past honey season was peculiar to itself; in all my experience, I have never seen just such a honey season. No stereotyped rules could be applied in the way of manipulation. We, here in Kentucky, had two springs, with a season of nondescript weather between. In February and March my apiary was strong enough for the white clover harvest. Then the nondescript weather intervened, and spring again was here at the blooming of white clover.

When swarming commenced in earnest, the hives were well filled with brood, but the combs contained very little hatching brood; so unusual is this state of things in my locality, that entirely new management had to be applied. A little thought would convince the experienced apiarist that it would not do to move the old hive to a new location when a swarm issued, because there was no hatching brood, or not enough of it, to speedily recruit the strength of the colony so as to insure protection to the large quantity of unsealed brood at a time when the weather was damp, and the nights cool. Then, on the other hand, though the swarms were of usual size, they were made up of bees reared in February and March, and hence their vitality was well nigh spent; therefore if such a swarm is given a new location, it will dwindle so rapidly that a poor yield of honey is the natural result. At the time mentioned, white clover was blooming rapidly, and was yielding the nectar profusely—a state of things which always excites swarming—and my bees responded generously.

As the swarms issued, all the combs containing brood were taken from the brood-chamber, and adjusted in a super on the hive body; the brood-chamber was then filled with empty combs, and a queen-excluder adjusted on its top. The super containing the brood was put on the queen-excluder, and the surplus case, or cases, went on top of the super. The swarm was thus made to enter the newly-prepared brood-chamber below the queen-excluder.

The wings of all my queens were clipped, and the work was quickly and easily done. I treated over 20 swarms in this way, and only one of the number swarmed again. The experiment was a most gratifying success. These colonies gave a large yield of surplus, both of honey in the comb and honey extracted. The plan is not given as "new," but it is *new* as applied to the condition present in my apiary at the time of swarming.

Under the circumstances, had I practiced any of the plans that necessarily separate the swarm and parent colony, my surplus crop of honey would have been nearly a failure. But by keeping the bees all in one hive, and by tiering up to suit the size of the doubled-up colony, I secured a profitable yield of honey of extra-good quality.

For several years past, I have practiced the plan described above, to prevent increase, and to satisfy the swarming impulse, and while under ordinary conditions the plan does not always result in no further swarming for the season, it is the only plan I have been able to rely upon to control increase.

THE HONEY CROP OF 1890.

It was about an average one, but I guess it required management peculiar to the season, to make it so. My apiary averaged about 66 pounds to the colony, about one-third of the crop being fancy comb honey in one-pound sections.

MARKETING THE HONEY CROP.

There has been a great deal said about "holding back for better prices, etc." All this is contrary to my experience. I commence to dispose of my honey crop just as soon as the first honey is removed from the hives. People in the country want honey as soon as they hear of "bees swarming," and my sales are brisker early in the season than at any other time. Of course I speak of my home market. It is easy enough to set a price on the honey and stick to it, but my advice is to let it go as fast as possible. The larger part of my crop is always in the extracted form, but I produced this season 1,500 sections of comb honey in fancy shape. Many of the sections of were cut short by the hot wave coming on prematurely, and I had a problem to solve in marketing the badly-filled sections. All the nicely filled sections were put into crates holding 24 sections each, and then sold in the city market for 16 cents per section. As the sections were light weight, averaging only about 13 ounces, I regard the price a good one.

The honey of the poorly-filled sections was cut out and packed daintily in 4-quart tin buckets, and the corners were filled with a nice, light-colored article of clover honey extracted. When these packages were made up they contained 5 pounds of cut comb, and 3 pounds of clear honey, extracted, making the packages uniformly 8 pounds each. The lids of the buckets were fastened down with annealed wire, and crated four buckets in a crate. Each bucket had a plain label with rubber stamps. They were sent to the city market as an experiment, and they sold at sight for 15 cents per pound. I am much pleased with the result. Poorly finished sections will not trouble me in the future.

For good, thick honey, such as I produce by employing plenty of good combs in working the tiering system, so as to have the honey well thickened on the hives, there is nothing equal to the tin bucket as a package for shipping, and especially for selling honey both in cut comb and the extracted form. The tin buckets, bought at wholesale prices, cost me a little less than any other form of tin vessel, and the honey will sell for from 1 to 1½ cents more per pound in them in a jobbing way, than for the same article in close vessels. The obvious reason is, the wire fastening can be untwisted, and the lid of a bucket removed, and there the nice, thick honey is viewed to the very best advantage. I use the tallest form of the standard family tin buckets in use—4, 8 and 10 quart buckets being my favorite sizes.

I make weekly shipments in these dainty packages to my commission merchant, who sells out ready for the next consignment, and remits a check or draft as often as I direct him to do so. I can say without reserve, that the season's work has been one of profit and pleasure to me.

EXPERIMENTING IN FEEDING BACK.

To have unfinished sections completed by feeding back, I think can be made profitable by proper management, if the demand for comb honey justifies the extra care and labor. I have experimented in this line the present season, and it has paid me a fair profit, counting time and margin between the price for clear honey, and honey in the comb. I here give the work of one colony, drawing from my memorandum book the facts, which will answer for any other colony managed in the same way:

A feeder just the size of the top of the hive, and the same size of the section-cases, was used. The feeder, however, is only three inches deep, including the bee-spaces at the top and the bottom. It is arranged so that the bees can pass from the brood-nest through the centre of the feeder as well as at both sides. The feeder projects at the back of the hive far enough to expose the two holes in which the feed is poured when filling the feeder, and the holes are covered with close-fitting buttons.

After the honey harvest was over, and the robbing impulse was at its worst stage, I selected a good colony of Italians, and made the brood-nest full of brood and honey, and placed the feeder on top of the brood-chamber; and having gathered together all the partly-filled sections into cases, the work was commenced. The sections were from one-fourth full to nearly full of comb, and most of them had a little honey in them. At first one case was adjusted on the feeder, and the feeding begun. Good honey was used, diluted with warm water, one pint to eight pints of honey.

The first two days the colony took 25 pounds of honey, when another case of sections was given them. The cases hold 32 sections 4¼x4¼x1¾, and, when well filled, the sections average 14 ounces. Afer the second case was put on, I fed 8 pounds a day for two or three days, and put on the third case. Every colony will not work alike—some will go faster than others, but this colony worked faster than the average. I now fed 5 pounds a day, skipping a day at intervals until the three cases were filled—96 sections.

The feeding was stopped after the sealing was half completed. This is necessary, or the bees will injure too many of the sections with brace-combs. It required 93 pounds of honey to finish the 96 sections.

The three cases were removed, and the work commenced anew. One case was put on, and 6 pounds of honey per day was given for three days, when a second case was added, and the feeding kept up until the combs were drawn and filled; towards the last, the amount of feed was diminished. It required 43 pounds to finish the 64 sections.

It will be seen that this colony finished up 160 sections, using 138 pounds of honey. According to my estimate, all these sections contained about 30 pounds of thin, unmerchantable honey when placed on the hive, and when finished they brought about $25, at a cost of 138 pounds of extracted honey, worth $13.80.

It will be noticed that I have taken no account of partly-filled combs, and the estimated 30 pounds of thin honey. These items are left to the intelligent reader to figure out.

The greatest difficulty to be overcome when "feeding back," to have sections completed, is the incorrigible tendency of bees to build brace-combs between the sections, and to bridge the combs, and that troublesome feature of having open cells of honey around the edges of the sections. If the combs are to be crated for the market in good shape, separators are essentially necessary, and then many combs will be damaged by little brace-combs breaking loose, and causing breaks in the capping of the sections.

Christiansburg, Ky., Sept. 27, 1890.

QUEENLESSNESS.

Why Some Colonies do not Rear Queens.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

"Good morning, Mrs. Harrison; I came to call you to account; didn't you say that when bees were queenless if you gave them a frame of larvæ and eggs, they would rear a queen? Now I know that they won't. One of my hives had pretty plenty of bees, but as I could find neither queen, eggs nor larvæ, I inferred that they were queenless; and after considerable work, lifting out frames of other hives, I found one I considered just the thing exactly; the queen was upon it and I saw her lay. I took the frame out so quietly that she did not appear to notice it, and as I held the magnifying glass over her, I saw her poke her head into a cell, inspect it, and then curl her tail into it and lay. She seemed then to take fright, and I let her run down among the bees, so I know that at least the eggs were fresh enough. I put this frame into the queenless hive, and in about 10 days examined it, expecting to find sealed queen-cells, when lo, there was nothing of the kind—nothing whatever where the eggs and little worms were. There was some sealed brood where the big larvæ were. Now what became of it, I would like to know?"

My friend, do not jump to the conclusion that queenless bees never rear a queen from eggs or larvæ because yours did not. If a baby should be left at your door, and you had no milk nor could not obtain it, it might perish. You put into a hive bee-babies where there are no nurses giving milk, or in other words, young bees with prepared food, and are surprised that they are not reared. The larvæ old enough to live on honey and pollen, are saved.

If you had first given this colony a frame of sealed brood, and when many of the young bees had emerged given them a frame containing eggs and larvæ, you would have had the larvæ reared and queen-cells built. I think it is poor economy to "rob Peter to pay Paul." You lost a frame of brood, and the colony that you took it from will have less bees in consequence.

Peoria, Ills.

BROOD-FRAMES.

Notes of Travel Among New York Bee-Keepers.

Written for Gleanings in Bee-Culture

BY ERNEST R. ROOT.

I may say at the outset, that one of the main reasons why I made this trip was to learn something about closed-end frames, and, in particular, frames at fixed distances, whether closed or otherwise. Mr. Elwood, Capt. Hetherington, and almost all bee-keepers whom I visited among the York State hills, are using fixed frames of some sort. It will be remembered that Elwood and Hetherington use the closed-end Quinby frame and system. Their frame, however, is about two inches shorter than the regular Quinby, retaining, I believe, the original depth.

CLOSED-END VS. HANGING FRAMES.

Well, after leaving Mr. Tunicliff, Mr. Elwood and I started *en route* for one of his out-apiaries, and were discussing fixed distances and the rapidity with which they could be handled, as compared with the common suspended or hanging-frames. Said I, "*If* fixed frames can be handled as rapidly, and at the same time without killing bees as the hanging-frame, they will be the frame of the future." Mr. Elwood did not boast very much what he could do—in fact, he did not make any very great claims to the system, etc., which he was using. Sometime ago, in an article he said he could handle the closed-end Quinby as rapidly as we could the hanging-frame. I well remember at the time I did not doubt his veracity, but I did somewhat question his knowledge as to the manipulation of the suspended frame. I told him, as we approached one of the apiaries, that one of the privileges that I had long desired was to see him, or some other bee-keeper using the Quinby frame, handle them as rapidly as the hanging-frame, and not kill bees.

By this time the yard which we were to visit loomed up in sight off in the fields at the foot of one of those big hills. It is located at some distance from the road, partly because of the protected position, and partly because it is secluded from those who might pilfer or meddle with the hives. We drove up under a low-spreading evergreen not a great way from the apiary. We there unhitched and led the horses a little bit further off, and gave them their oats. As we did so, Mr. Elwood said there was a spring up on the hillside, and that, before eating our lunch, if I felt inclined, we would go up and see it, and get a pail of water. After strolling a little distance among the rich undergrowth, suddenly a beautiful spring of water came in sight.

Perhaps I might as well remark, by way of parenthesis here, that all the York State water, especially from the hillside springs, is clear and cold. In my own State of Ohio it is not very advisable for me to drink from different wells or springs—at least to any great extent; but on my bicycle tour through New York I drank freely from every roadside spring with impunity; and, oh, how good, pure and cold it did taste! What would I have given if I could have transported one of these springs, that seemed so common in York State, to my own home in Ohio!

Mr. Doolittle had water from one of these springs piped to his house. I remember how thirsty I was, and how refreshing the water. Just think of it—a running spring in the house of beautiful water! But, to return:

Mr. Elwood and I secured the lunch-basket; and after hunting around for a good log to sit on, we partook of a hearty lunch; which, being dispatched, we put on our veils and proceeded to the yard. I had expected to see large Quinby hives; but, to my surprise, the brood-nest or brood-chambers were no larger, on the average, in cubic capacity, than are those in our eight-frame dovetailed hives. I had supposed that the York State bee-keepers, like the Dadants, advocated and used large brood-chambers. So far as I was able to discover, however—in the production of comb honey at least—they practice contraction, and use brood-chambers no larger in capacity than an ordinary eight-frame Langstroth hive. The frame being two inches shorter than the original Quinby, six of these frames would be about equivalent to eight of the Langstroth, I should say, without figuring. I was surprised to learn that all, or nearly all, of the bee-men of York State who have adopted the Quinby closed-end frame, like Mr. Elwood and Capt. Hetherington, use it two inches shorter, and it is no doubt a better frame for the reduction in length.

After lighting the smoker, Mr. Elwood and I entered the yard, and he proceeded to open up a hive while I was looking on with eager expectancy. The entrances were on the under side of the hive. Blowing a little smoke under to drive away the guards, he lifted off a case of sections. I expected to see those frames come apart with a snap, and an onslaught of bees. There was no snap or onslaught. He picked up and handled the frames as rapidly as you or I can handle suspended frames; and I am not sure but he manipulates them more rapidly.

Mr. Elwood then examined continuously 25 or 30 other colonies; and when I came to think of the time he had spent in doing it, of the queens we had seen, of the brood surface we examined, I was simply astounded. I feel pretty sure I could not have examined the same amount of brood surface in the hanging-frame in so short a space of time. Did he kill any bees? Not one that I saw. Did the frames stick together? Scarcely at all; and yet the bees were hybrids. Here was a large yard of, say, over a hundred colonies. I do not remember to have asked how long it would take him to examine each one; but at the rate he handled those before me he would have gone through the whole apiary in four or five hours, and hunted all the queens besides. He did not move very rapidly; on the contrary, his movements were deliberate, but they counted.

I am well aware that this is a heavy testimonial for the closed-end frames on the Quinby plan; but I deem it but just to give it, because I know the bee-keepers of the West, and those who have been using the hanging-frames, have somehow got the idea into their heads that the closed-end frames were simply intolerable, and that the bee-keepers who were using them were either very much behind the times, or so stubborn as not to be open to conviction that there might be something better. Indeed, when we consider the fact that nine-tenths of the bee-keepers of that section of New York where I visited are using fixed frames, and are intelligent and progressive men; and when we consider the other fact, that they make bees *pay*, we must admit that their system is not so clumsy and awkward, after all. Capt. Hetherington, years ago, used hanging-frames faithfully, and finally discarded them for the closed-end Quinby. Capt. Hetherington, with his three or four thousand colonies; Mr. Elwood, with his 1,300, and a great many others, owning from 300 to 400 colonies in this part of New York, use only fixed frames, some Quinby and some Hoffman.

NO BURR-COMBS.

While Mr. Elwood was examining the hives I was pleased to note that there were no burr-combs on the tops of the frames. No, I do not believe I saw a single small spur. When I came to inquire into the matter, I found he used top-bars fully an inch wide and five-eighths of an inch thick—perhaps in some cases one-half inch thick with *fixed distances.* I emphasize this purposely, because I believe that this is one of the secrets. I could not discover that any of the bee-keepers who had used fixed distances with top-bars five-eighths of an inch thick and an inch wide, in that section of country, had used honey-boards. No, a honey-board was a thing that none of them had ever tried. With no burr-combs, what need had they of them? Now, if I am able to judge correctly, with fixed distances we can have *thinner* top-bars; but with hanging-frames and no arrangement for automatic spacing, in order to do away with burr-combs, there must be thicker top-bars. I examined into this matter very carefully all through this trip; and since my return home I feel confirmed in what I have said above in regard to the presence or absence of burr-combs, their cause and prevention.

I am very well aware that I have given some flattering testimonials for the Quinby system. I am not sure, however, that bee-keepers generally would not like the open or movable sides. The hive looked a little top-heavy also, and a good many bee-keepers incline toward the shapely appearance of a thing as well as its practical utility with the two combined.

After leaving this yard we visited two or three others. All that I saw were located in spots that were peculiarly picturesque. The scenery—perhaps a big hill on one side, a valley beneath, mountains over in the distance, all combine to make many of the locations grand in their outlook. As our time was limited we did not visit all of the yards, for one yard is largely a repetition of the others.

ELWOOD'S MAMMOTH BEE-CELLAR.

The next morning, as we expected to visit other bee-keepers, I took a walk around the premises. "Oh, yes," I said, "there is that enormous bee-cellar that I want to see." Mr. Elwood conducted me to his mammoth repository under his large bank barn. If I remember correctly, it was divided equally into two compartments, each one capable of holding perhaps 500 colonies. Just think of it—1,000 colonies, practically, in one cellar! We bee-keepers who talk about wintering 50 or 60 colonies in a cellar successfully, might find it another thing to bring through alive 1,000 colonies in a single repository; and yet, if I understand correctly, our friend is generally successful.

In this part of York State they have very severe winters; and, as a general rule, I found that bees are wintered in-doors. I noticed that Mr. Elwood uses a sub-earth ventilator, and he believes it to be a good thing at times. He does not, however, use it with its mouth out-doors open full width most of the time, but only occasionally.

"What do you do," I said, "when it becomes too warm, and the bees get to roaring—that is, uneasy?"

He took me out to the mouth of his sub-earth ventilator, and showed me how he could, by enlarging the opening, let in enough cold air to reduce the temperature enough to accomplish the desired end. The winters being so cold, he generally has no trouble from a too high temperature in the cellar.

Before I forget it, perhaps I had better explain that, instead of removing the bottom-board after putting the bees into the cellar, the boards have a hole six or eight inches square in the center, and this hole is opened or closed by means of a convenient slide. When contracted it acts as an entrance during the summer season; and when opened wide it gives ample bottom ventilation while in the cellar. While we were discussing these things, we slowly emerged from the cellar, and finally entered the shop, or honey-room, partitioned off from one end of the barn. I discovered here that Mr. Elwood uses the section-holder that we use on the dovetailed hive. When we first introduced it I was not aware that such extensive bee-keepers were already using it, and liked it, although I knew that the idea was by no means new. The fact that such a man as Elwood uses them, in preference to even the T super, confirms me in the belief that they must be one of the best comb honey arrangements made.

I noticed in this honey-room that friend Elwood uses a four-piece section with flat-bottom foundation. The sections are put together with a machine of his own invention, and they are glued solid together. I tried to break several of the sections when so put together. They certainly were very secure, and no ordinary amount of hauling, even over rough roads, would jar them out of true.

"There," said Mr. Elwood, pointing to a few crates of honey, in one corner of the room, "is all the *white* honey I have obtained this year."

"That will not be your entire crop?" I said.

"Oh, no!" He replied, he would get *perhaps* 25 pounds per colony of mixed and buckwheat honey. The basswood had been almost a failure with him during the past season, and the clover was but little if any better. It was the worst season he had experienced in many years.

"What is your average per colony?" I asked.

"If we get 50 pounds we are satisfied," he said.

Let us see—50 pounds multiplied by 1,300—65,000 pounds. It seems as though he ought to be "satisfied." If Capt. Hetherington (and I presume he does) obtains in a fair year a proportionate amount, his crop would make the "eyes" of some of us bee-keepers stick out pretty prominently.

HYBRID BEES AND BUCKWHEAT HONEY.

Speaking of buckwheat honey above, reminds me of the fact that Mr. Elwood keeps hybrid bees almost exclusively. He rather prefers them because they are a little better for working on buckwheat. Through my trip in York State on the bicycle, I believe I do not exaggerate when I say that I must have seen thousands of acres of buckwheat.

The farmers, instead of confining their crops to the proceeds of a single acre, raise it by the ten-acre fields; and I believe it is usually a paying crop. I was pleased to notice, also, that the Japanese buckwheat was being introduced very largely. The bees work on it just as industriously as they do upon any kind of buckwheat. Several fields that Mr. Elwood and I passed were fragrant with the aroma. In fact, I passed on the bicycle so many buckwheat fields that the odor became sickening to me, as I do not like buckwheat honey.

But the people in York State, I am glad to know, are not like me. At most of the hotels where I stopped, they had this black looking honey on the table. By making inquiries I learned that some of the guests preferred it. They like that rich, dark-looking honey of their fathers. I personally came across a great many people who prefer buckwheat to any other they had ever eaten; but I am afraid I should have to go a good way in Ohio before I could find one who had this preference.

CROSS HYBRID BEES.

Mr. Elwood's hybrid bees I found were cross. Let me relate a little incident.

I told Mr. Elwood I should like to make some detail photographs of one of his hives. We accordingly proceeded to the yard. He pointed to one that showed well, and was about what he used in all his apiaries. "I will just change this cover," said he, removing one from another hive, "and put it on the one you are about to photograph. As he did so he happened to let it drop on the hive to be "Kodaked"—enough so as to stir up the sentinels. Neither of us had a veil on. I stood at a respectable distance, say six or eight feet, in front of the hive, Mr. Elwood a little in the rear. My Kodak was all primed and ready. Just then those pesky hybrids began to pour out like a hailstorm. I wanted to run. Sting—it seemed as if I could not endure to take even a snap shot at those "fellows"—or, rather, at their hive. The first one planted a sting right on my nose, and, of course, the rest of them saw fit to visit the same vicinity, attracted by the poison. Now, you know I could not stand that. My ever ready veil was in my hip pocket. My eyes were suffused with tears, and I hastily laid the Kodak on the ground, whipped out the veil, and drew it over my head in some fashion or other. Somehow or other I felt like running. The veil was pulled over, but those scamps did not stop to buzz in front, but with provoking deliberation crawled up under and made things worse. I pulled out the Kodak, and said, "Now or never;" and while the tears were streaming from my eyes with pain, I managed to be able to see enough from one eye to get a view of the hive. This time I did not wait, but touched the button, and the shot was taken. As I did so I looked up to see where my friend Mr. Elwood was. Presently I espied somebody running, and his arms were revolving about his head in a characteristic fashion.

Now, Mr. Elwood is slightly baldheaded, and his hat was gone. As I saw him rub sting after sting out I did not blame him for retreating. I understand from his men that he can stand as many stings without wincing as anybody else; but it did tickle them to see their big boss run from the bees. One of Mr. Elwood's little boys was heard to cry out lustily about this time, for he was out in the yard bareheaded and barelegged. His father directed him to his mother, and then called out: "You didn't catch me in that picture, did you?"

"As you were running, I presume I did." I replied; at least, I was mean enough to say I hoped so. I took time now to rub the stings out of my nose. It did not swell, however, and after a couple of hours I felt no ill effects. As we started to leave that morning for another ride among bee-keepers with Mr. Elwood, this little boy who had been stung, came out to greet us with a good-by. His face was considerably swollen, and it looked as if he had been stung by a bee. My camera was attached fast to the bicycle, or I would have been cruel enough to have taken his picture. Mr. Elwood, although stung much worse than I, seemed to show no ill effects.

In order that we might visit together, the bicycle was tied on to the wagon, and we started for the home of Mr. Julius Hoffman, by way of the Van Deusens, the people who make that beautiful flat-bottom foundation. We went over some terribly bad hills—hills that I should not care particularly to have gone over with a bicycle; and I was glad there were some good horses ahead of me that were used to that sort of business. More beautiful scenery was presented to me, and ere long we were overlooking the flat-bottom valley which has been before described by our friend Rambler.

AT SPROUT BROOK, N. Y.

In a few moments more we were having a cordial handshaking with the Van Deusens. I did not ask to go through their establishment; but was shown some of their beautiful foundation. They have quite a large factory, and evidently do quite a business. I took particular pains to notice that this country was very flat bottomed—an appropriate location for making foundation. We were cordially invited to stay and take dinner; but as my time was limited, I explained that I should have to be moving along.

AUTUMN.

Hints About Work in the Apiary in Autumn.

Written for the Country Gentleman

BY GEO. A. STOCKWELL.

The bee year is ended. The hum in the hive, musical and delightful always, is softer, subdued, with minor chords in it, for at this season of the year all natural sounds—katydid's rasping, and cricket's cross-leg sawing—have plaintive strains to most minds dwelling upon the mutability of all things. Certainly, to the bee-keeper whose bees have added nothing to his bank account, the low hum of his bees will have a melancholy sound.

But while the hum grows fainter, the work in the hive goes on as before, and will continue until autumn flowers fall under the blight of the first frost, for the "hum of the hive," of which ambitious poets, who were not bee-keepers, evidently, have sung, is controlled by the temperature absolutely.

The bee year ends and begins with the first frost. Sometimes the new year, or the preparation for it, begins before the old one ends. The success in the new year depends upon the work done in the fall of the old. If colonies be weak from any cause, they must be made strong. Weak colonies in the spring are worthless except to play with, and not satisfactory playthings, then.

By some means, natural or artificial, the queen must be induced to continue laying as long as possible, for to make progress in the spring, the winter bees should be young bees, and the force large. Old bees going into winter quarters may result in such loss during the winter that the colony will be crippled in the spring. Having a large force of breeders, the queen will begin to lay earlier, and by the time new honey comes the colony is prepared to gather it, and to swarm when it ought to, if at all. Success in bee-keeping depends upon these conditions.

All work in the colonies should be completed before propolis hardens, that the bees may have opportunity to make snug for winter by repairing broken comb, and stopping cracks and chinks with propolis. Assured that the colonies are in good condition numerically, and have sufficient stores for the winter and a cold spring, if there should be one, leave them undisturbed to well-earned quiet and repose, to their cups of amber nectar, and to their household duties.

Beginners should commence now. Bees are cheaper in the fall than in the spring. If you wait until spring, the 1st of June may come before the bees arrive, for they cannot be shipped before warm weather. To practice with, and make acquaintance, get gentle Italians or the lazy and indifferent Carniolans.

Providence, R. I.

A VISIT.

Mr. Henry Alley's Apiary and Methods Investigated.

Written for the American Bee Journal

BY E. L. PRATT.

I called on Henry Alley at Wenham, Mass., in September, and was royally entertained by one of the most genial and out-spoken old souls I have met for a long time.

The first thing I saw when I stepped on the premises was Mr. Alley himself, busily engaged taking care of a nucleus colony that had swarmed out.

After walking through the yard among the hundreds of little fertilizing hives and full colonies, we at last came to what he calls his perfect colony of Italians. This colony we examined without smoke, as we did several of his best Carniolan colonies. They all had plenty of natural stores to winter on.

Mr. Alley has great hopes for Carniolans. He believes they can be bred to a very desirable bee as the Italians have been. His great trouble was with getting a pure mother. He says the first Carniolans that came to this country he discarded because of their impurity. But now they are much better, and will improve from year to year.

After we had viewed the yard, and had opened about all the hives, we retired to the sanctum of the *American Apiculturist*, and talked about bees, steadily, for three or four hours.

Mr. Alley does not think very much of the new method of rearing and keeping two or more queens in a hive. The experiment he tried was a decided failure. He has not yet tested the chambers, however.

He never uses protection of any kind while handling his bees. He will not clip a queen's wing for anybody, as he is much opposed to the practice.

Foundation is fixed into the "Bay State Hive" frames in saw-kerfs without wire. Sagging never occurs with him.

The sections which he uses, are the one-piece open top. Hs is rather partial to sections opening all around.

His father was an organ-maker, and many of his most useful tools are those left him by the old gentleman.

He uses tacks in different positions for registering purposes. This system is very plain and simple.

The shipping-cage used by him is a simple one-half inch block with one two-inch hole connected by a three-fourths inch hole for the candy. The covers are of thin board, one of which has a small hole for air. The queen is put into the cage by forcing back the screen cloth. This cloth is a little short at the candy end, so that when the bees remove the candy the queen is introduced.

He uses the Bingham smoker and Dadant's foundation, is an eight-frame advocate, and believes in out-door wintering, with double-wall protection. Cushions of cotton about six inches thick are used over the frames in winter.

At the close of the queen season, all the small combs are put into barrels and headed up. By so protecting, the combs are fresh and white in the spring. Mrs. Alley attends to all wax rendering, etc. His two daughters do considerable writing and copying for him.

Henry Alley is about 55 years of age, medium height, with long, gray beard, dark complexion, and dark eyes, brimfull of fun. I am not flattering when I say he is a handsome man, a royal good fellow, and a pushing, enthusiastic genius.

The only fault I found with the visit was that my train left too soon.

Marlboro, Mass.

ILLINOIS.

Report of the Capital Bee-Keepers' Convention.

Written for the American Bee Journal

BY C. E. YOCOM.

The Capital Bee-Keepers' Association held their annual meeting at Springfield, Ills., on Sept 26, 1890, with P. J. England in the chair.

The members reported an increase in bees of only 21 per cent., with a yield per colony of about 30 pounds, more than two-thirds of which is extracted. Only 2,275 pounds of comb, and 10,340 pounds of extracted honey remain unsold.

Mr. P. J. England delivered the following

President's Address.

It has been one year since the organization of this society, and although we cannot claim a large number of members, I feel that we have made commendable progress, and have accomplished some good. Let none of us become discouraged, but press onward to greater success. I am not in favor of urging everybody to become bee-keepers, but I do desire for us to make a special effort to get all extensive bee-keepers within our bounds into our society, believing that we would be mutually benefited. Many were the predictions that this would be a No. 1 year for the secretion of honey, but, contrary to our expectations, 1890 will go on record as being a year of financial loss to many of our fraternity.

The supply of honey is very limited, and prices are booming; then how indiscrete we would be to flood our home market with "10 cent" honey. A few weeks ago, one of the merchants in this city told me that he could buy a good grade of comb honey at 10 cents per pound. I advised him to accept the offer, as comb honey was then worth 16 cents per pound in Chicago. But as I work my apiary entirely for extracted honey, perhaps it would not be amiss for me to give a little of my experience along that line.

For comb honey there seems to be a regular demand, but if you produce extracted honey, a demand must be created for the product; and, strange as it may appear, you will have more trouble to sell a strictly No. 1 grade of honey, than a grade that I would not desire to sell at any price.

People expect honey out of the comb to taste like it did when their grandmothers prepared it by heating the comb, bee-bread and grubs to the boiling point, and then give the whole mass a big *squeeze*.

There is no necessity for selling extracted honey at one-half the price of comb honey—in fact, people sometimes wonder why I do not charge above the price of comb honey for it. If you are producing extracted honey, there will be no unfinished sections to disturb your peace of mind, but your crop can always be placed before the people in a marketable condition.

Be sure to keep the different kinds of honey separate, and always sell by sample. Many persons seem to think that all honey should taste alike—they do not know that each variety of honey-producing flowers secretes a nectar peculiar to itself. I labored hard to secure the patronage of a wealthy banker, and so long as I furnished him a No. 1 grade of clover honey, all went well—but, alas! on one occasion I was out of clover honey, and without asking him to sample my "goods," I left him 25 pounds of another variety. In due course of time I again called on this same banker, to supply him with honey, but instead of handing out the silver dollars, he very promptly, and I believe conscientiously, pronounced me a "fraud."

Allow your honey to become granulated, and inform your customers that granulation is a sign of purity.

I prefer tin packages varying in quantity contained, from one to 25 pounds. I grade the price according to the amount sold—that is, the larger the quantity purchased, the less it costs the customer per pound. By so doing, I have built up a large demand for 25 pound buckets.

For success in selling honey, I have no one to blame but myself. It takes personal effort to create a steady demand for extracted honey. You need not depend upon the ordinary merchant to build up a trade for you—he will as a rule make no special effort to sell your honey. Of course there are exceptions to this rule, and if you are fortunate enough to find the exception, be sure to keep him in honey.

Springfield has redeemed its reputation, and demonstrated the fact that it can support a good Fair. Of course, no large amount has been offered as premiums to bee-keepers, but I believe that the Fair Association will advance the premiums as fast as we deserve them. Then let us make an effort in 1891, and have such an exhibit as will astonish even ourselves.

P. J. ENGLAND.

Some of the members sell extracted as high, or nearly as high, as comb honey, saying that if they offer it for a less price, their customers will at once conclude that it is adulterated.

Geo. F Robbins asked, "How much more of extracted than comb honey can be produced?"

S. N. Black said that the latter costs him, on an average, about one-third more than the former.

P. Van Doren asked what to do with unfinished sections. He had tried placing them on the hives the following season, but said that they were of a dark color.

Mr. Robbins advised shaving the combs, thereby diminishing the depth of the cells which will be drawn out again with new wax.

C. Becker recommends using them for feeding in the fall or early spring, rendering the wax and making kindling of the sections.

The convention then adjourned to meet at 1:30 p.m., at which time the convention was called to order by the President, and the following officers elected for the ensuing year:

President, P. J. England; Vice-Presidents, Jas. A. Stone and A. N. Draper; Secretary, C. E. Yocom; and Treasurer, Geo. F. Robbins.

Mr. A. N. Draper, of Upper Alton, Ills., then read the following essay on

Wintering Bees.

With me, the wintering problem has never been difficult. I have had more bees to die from starvation in wintering, than from all other causes put together. Two years ago I buried 16 hives, *a la* Hutchinson, and they wintered perfectly, with scarcely any loss of stores or bees.

Years ago I wintered a lot in a closet under the cellar stairway; then I tried them under the north porch, after banking up with earth, and making it tight again; they wintered all right. Then I think it was in the winter of 1873-74, I followed some of Mr. A. I. Root's plans. In February I dug a pit about 5 feet deep, 16 feet long, and 6 feet wide; covered it with glass, and put in a small stove to keep the bees warm on cold days, and when the sun did not shine. Of course I had a lot of house-plants in there, and some rye flower and feeders. Some of the bees were like the proverbial calf—lived all winter to die in the spring. Mother says that was the most foolish move I ever made, if A. I. Root did suggest it; though, it might work, if properly attended to.

Perhaps it would be well to describe the honey resources of this locality, before describing the wintering process.

In the first place, in my vicinity the land is very hilly, and the soil is not deep, and in a dry time white clover and other honey-producing plants dry up quickly. What white clover we have, comes early for this latitude; usually we have a late fall crop in September, and sometimes it lasts till the middle of October, or even later from heart's-ease, asters and golden-rod.

This year I have moved 96 colonies to a lake where there is lots of Spanish needle, and at this date (Sept. 20) the hives are all full of brood. I have between 400 and 500 8-frame Simplicity hives, and I am using from two to four of these 8-frame bodies to the hive for extracted honey, and in lots of these hives there are from 10 to 12 frames of brood now. Perhaps they are going into winter quarters too strong, but I do not think so.

Now the question comes up, How shall I get them in the best possible condition to secure a crop of honey next spring? Wintering without loss does not cover it. As I am working to get out all there is in it, I must accomplish it with the least expenditure of time, labor and honey.

During the winter and spring the apiary should be well sheltered from the north and west winds. I use a tight board-fence on the west side and north end, six feet high, at one yard. The home yard is naturally well protected. I place the hives on stakes 4 inches high, and stuff underneath with leaves in November. What colonies are too strong this fall to go on six or seven frames, I shall lift over into hives made last winter, according to Dadant's plan as described on page 163 of the "Revised Langstroth."

I wish to call attention right here to a clause in paragraph 306, page 151 of the same work, as follows: "The Langstroth Simplicity is long enough, but hardly deep enough. The Quinby is deep enough, but would be better if a little shorter." I made 200 of these hives last winter, depth of Quinby and length of Simplicity, 18 inches across in the clear, inside. Into these I can place 8 frames and a division-board on each side, then have nearly 4 inches to pack full of leaves on each side. Now with a deep cap filled with leaves, they are in the best possible condition for winter, as they are not affected by sudden changes of temperature.

I have read time and again that all winter stores should be capped over before winter sets in. This is nice theory, but false in actual practice. During October, November and December, bees consumed very little honey, and I have noticed lots of unsealed honey in the hives in December, and never could see any harm come from it, but I can readily see how harm could come by not having it there. I am always glad to see the late fall flow of honey.

The descriptions of devices and methods of wintering have been so thoroughly ventilated in the standard works, and in the bee-papers, that it is almost impossible to bring up anything new.

I will note again from Langstroth Revised, viz: "We have for years wintered a part of our bees on the summer stands, by sheltering them on all sides but the front, with forest leaves closely packed and held with a frame-work of lath." The next paragraph contains the key-note to success in wintering—the placing of warm absorbents immediately over the cluster to imbibe the excess of moisture that arises from the bees without allowing the heat to escape.

What is the use of putting bees into a cellar, then packing in the spring in order to get the bees strong early, thus making double work of it? I think that the best plan is to contract the hives with division-boards to suit the colony. Place in no more combs than the bees cover well. The colder the weather, the more compact bees will cluster. In extreme cold weather they will cluster so compactly that from 60 to 80 bees will cluster inside of a cubic inch. As it warms up, the cluster will expand, to again contract as it gets cold again, consequently we want them packed to prevent them from getting warm, as well as from getting cold. But when the middle of February or March 1st comes, we want this changed. We then want them to be warmed by the sun, just as much and as often as possible. I want my hives just as full of bees as they can be, by the time the first white clover blossoms open. If I am going to get a crop of either comb or extracted honey in the Simplicity hive, I want two stories chock-full of brood—of course the two outside frames will be more or less occupied with bee-bread and honey in both stories.

The past season I put 9 frames in the lower hive, and I do not know but what it is a good scheme. Now when we go to putting on boxes, follow Mr. Heddon, and put the lower body on top, then the boxes. If you want to climb trees, hive swarms, and get no honey, just try contracting the brood-nest, especially if you have two or three yards to look after. I have often wondered if Mr. Doolittle and some of the other small-hive men, ever saw a really first-class colony of bees at the beginning of the white clover harvest. If we expect to get a big crop of honey. we must have lots of bees when the flow begins.

To sum up the wintering problem from my stand-point, have large hives; pack well with forest leaves; have strong colonies and young queens; encourage late breeding in the fall, and have the apiary in a well-sheltered place in the spring. Feed rye flour in the warmest spots you can find, placed in a large barrel or hogshead, with the end with the head out to the sun. Leave no more combs in the hives than the bees cover, and see that they have plenty of old honey, or else feed sugar syrup. Keep placing empty combs (or combs containing honey but no bee-bread) in the center of the brood-nest as required, as the bees almost always have solid walls of bee-bread and honey at the sides of the brood-nest.

In all probability the crop of white clover next spring will be heavy, from the fact that the rains have come early enough this fall to give the white clover from the seed a chance to get a good start before freezing weather. In our locality winter rarely injures the white clover—it is the late fall drouths that do it up."

My crop of white clover honey this year amounted to about 5,000 pounds. It is too early yet to say what the fall crop will reach, though now it would probably run over 7,000 pounds, as the bees are just booming on asters and golden-rod. We will soon hear all the great bee-keepers singing a different tune about golden-rod, if it acts everywhere as it is doing in Madison county this fall. The bees have been busy on it for nearly a month. My bees will pay me better this season than ever before, and they will go into winter quarters in better condition.

A. N. DRAPER.

Mr. Stone asked, "What is the best plan for a honey-house?"

Mr. Robbins has one 12x12 feet, single-walled, with windows in the south to let in the rays of the sun. He says he can ripen honey in this house better than it will ripen on the hives.

President England explained how to make bee-escapes on the windows by placing wire-cloth cones at each upper corner extending upward and outward. Mr. Draper keeps extracted honey, after being fully ripened, in the cellar, bunged up tight. He had samples of different kinds of extracted honey that were kept in this manner, and they were fine.

The convention then adjourned to meet at the call of the Executive Committee. C. E. YOCOM, *Sec.*

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Oct. 10, 11.—Union, at Hamilton, Ills.
Daniel Shank, Sec., Clayton, Ills.

Oct. 15.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 18.—York & Cumberland, at Goodman's Mills, Me
C. W. Costellow, Sec., Waterboro, Maine.

Oct. 22, 23.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Gathered Enough for Winter.

The fall season is now ended, and a very light crop of honey has been harvested in the "bottoms," and none at all on the uplands; but in this vicinity, bees gathered about enough to carry them over winter. White clover, though badly killed in places by the dry, hot weather, is, I believe, in better condition than it was three years ago at this time. W. J. CULLINAN.

Quincy, Ills., Sept. 30, 1890.

Honey from White Daisy.

Bees swarmed but little in this locality the past season, May and June being wet and backward. Clover did not produce any more than enough to stimulate brood-rearing, and basswood was a complete failure. Through June and a portion of July white daisy yielded very well—one colony stored 48 pounds of this daisy honey, in the sections. Buckwheat yielded for a few days, then stopped short, and we have had nothing since. I commenced the season with 9 colonies, and now have 18, permitting only one swarm to issue from each colony. White daisy honey is a yellowish amber, rather strong in taste, and tough comb, with a muddy-gray capping. What is the opinion of bee-keepers in regard to the safety of this daisy honey for wintering bees? F. F. HARRINGTON.

Hartwick, N. Y., Sept. 26, 1890.

Unbusiness-Like Treatment.

My experience with A. F. Stauffer & Co. has not been such as Rev. W. P. Faylor's, as stated on page 635. On April 22, 1890, I sent them $2 for eggs; and waiting about three weeks, and not hearing from them, I wrote, asking if they had received my order, and they replied that they had, and would ship soon.

I waited until June, when I wrote to them again, saying that if they could not ship the eggs by June 16, to please return my money, as it was getting late; and still no answer came.

I wrote again on July 2, for the return of the money, as it was too late to set the eggs. Early in August I wrote again, asking them to return my money, and told them that was the third and last time I should ask them to return my money. It is now Sept. 26, and they have not returned the money, or even written a word to me. I would not take the eggs as a gift, now.

ISABELLA TREGO.

Swedona, Ills., Sept. 26, 1890.

Supplied with Winter Stores.

Bees will go into winter quarters well supplied. They have averaged about 30 pounds of honey each in one-pound sections, and they are still at work on various flowers—such as golden-rod and asters, and a little late buckwheat. We never have any trouble with foul brood in this part of the country. ED. SMITH.

Carpenter, Ills., Sept. 26, 1890.

But Little White Honey Stored.

I wintered 12 colonies last winter, and commenced the spring with that number, and had 4 swarms from them. I made, by dividing, 12 new colonies, which increased my whole number of colonies to 28. They did not store much white honey in the sections, and there was no buckwheat and fall honey. Prices for honey will be higher than usual. C. D. BARBER.

Stockton, N. Y., Sept. 24, 1890.

The Feeding and Life of Bees.

Late feeding is a mistake, and many a bad result has arisen therefrom. Late breeding we cannot always prevent, but it should not be encouraged. Young bees cannot endure the same length of confinement, if they have never had a good flight, as adult bees. The foregoing will perhaps impress the beginner with the evils of late feeding and breeding, and convey to him the cause of dwindling. Notwithstanding all that has been written upon the natural term of bee-life, there is still much misconception regarding the limit.

Xenia, O. C. E. WOODWARD.

Results of a Year and a Half.

A year and a half ago my husband took a swarm of bees from a tree, bought three more, and subscribed for the AMERICAN BEE JOURNAL, and with it as our instructor we commenced keeping bees. We have bought 6 swarms since, and now at the end of the second season we have 34 colonies. This year we have taken 300 pounds of comb honey, and 1,700 pounds of extracted, and the bees are still very busy at work on fall flowers and alfalfa. We have apricot and peach orchards, also a vineyard adjoining the apiary, and the bees have never bothered the fruit, except when drying, if pared, or punctured by yellow-jackets. The sun is very hot, and we keep our bees in the shade, and in winter they need no protection. We have seen bees working on flowers like the enclosed. Will you please tell me if it is golden-rod? MRS. P. W. MINTHORN.

Terra Cotta City, Calif.

[It is one of the golden-rod family, and a good honey-producer.—ED.]

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

DENVER, Sept. 15.—We quote: 1-lbs., first grade, 16@18c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Sept. 27.—We quote best white clover 1-lbs. at 16@18c. Extracted, 7@9c. per lb. Beeswax, 28c.
BLAKE & RIPLEY, 57 Chatham Street.

NEW YORK, Sept. 12.—Honey is in excellent demand, and finds ready sale at the following prices: Fancy white 1-lbs., 16@18c; same, 2-lbs., 14@15c; off-grades, 1-lbs., 13@15c; same, 2-lbs., 12@13c; buckwheat, 1-lbs., 11@12c; same, 2-lbs., 10@11c. Extracted, clover and basswood, 8c; buckwheat, 6c; California, 6¾@7c. HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Sept. 10.—Honey has sold well of late, despite the higher range of prices—17@18c being the value of white comb in 1-pound sections, and sells upon arrival; the weather being cool, a brisk trade is now being experienced. Extracted also sells quickly at 7@8c in barrels and cases. Supply fair.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Oct. 2.—Demand for comb honey continues good, but supply light. We quote: Choice white 1-lbs., 16@18c.: light 1-lbs., 14@16c.; dark 1-lbs., 10@12c. Extracted white, 6@7c.; dark, 5@6c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Sept. 10.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 11.—Demand for comb honey is larger than the receipts. We quote: White 1-lbs., 16c.; 2-lbs., 14c. Dark 1-lbs. 13c.; 2-lbs., 12c. Extracted, white, 7c.; dark, 5@6c. No beeswax on the market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 10.—Comb honey is selling at 14@16c; very little in the market. Extracted, 7@8c. Beeswax, 26c fur good.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, Sept. 22.—Demand is good for all kinds of honey. The arrivals are fair. We quote: Choice comb, 14@16c.; extracted, 5½@8c.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
51D26t 1m1y.

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

A B C of Strawberry Culture is the name of a neat pamphlet of 150 pages, by Messrs. T. B. Terry and A. I. Root. It covers the whole subject in an interesting manner, is nicely illustrated, and is just the work for those beginning to grow delicious strawberries. Price, postpaid, 40 cents. For sale at this office.

FOR SALE—**Tested Italian Queens** at 50 cents each; **Untested** at 40 cents each. Address,
OTTO KLEINOW,
150 Military Ave., - - DETROIT, MICH.
Mention the American Bee Journal.

SITUATION OFFERED—To a competent wood-worker, who thoroughly understands the manufacture of BEE-HIVES, SECTIONS, etc. Address, with references, W. H. PUTNAM, River Falls, Wis
38Atf
Mention the American Bee Journal.

For Sale! 25,000 pounds of the very **Finest COMB HONEY,** in scant 1-lb. Sections, put up in white Basswood Cases holding 12 Sections—glass on one side of the Cases, showing off the honey nicely. A very fancy lot. The price is **20 cents per pound** on board the cars here. Who wants the lot?

L. W. BALDWIN & SON,
40Atf INDEPENDENCE, MO.
Mention the American Bee Journal.

GROUND CORK
FOR
Packing Bees for Winter.

THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

The Lever.

THE NATIONAL - - - - - -
- - PROHIBITION NEWSPAPER.

Bright! Newsy! and Enterprising!

YOU SHOULD READ IT.

Sample Copy Free.

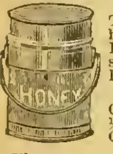
To New Subscribers, Only 50c a Year.

This offer closes November 1.

Center-Lever Company,
134 Van Buren Street, - CHICAGO, ILL.
13Atf—4Mtf
Mention the American Bee Journal.

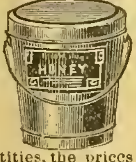
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon...holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00**, postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

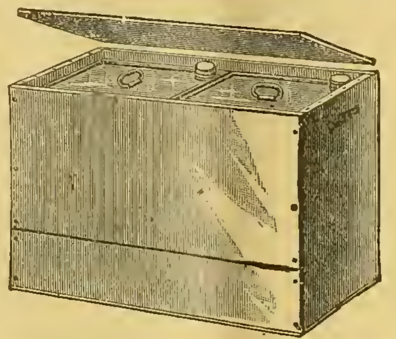
THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HANDLING BEES

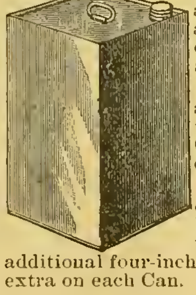
A **PAMPHLET**, treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can	(boxed)	$ .45
12 " Cans	"	5.00
100 " "	"	40.00
1 box of two Cans		.75
12 boxes "		8.40
100 " "		65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Muth's Honey-Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers.

Mention the American Bee Journal.

TAKE NOTICE!

BEFORE placing your Orders for **SUPPLIES**, write for prices on One-Piece Basswood Sections Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. Address,

R. H. SCHMIDT & CO.,
1Aly NEW LONDON, Waupaca Co. WIS.

Mention the American Bee Journal.

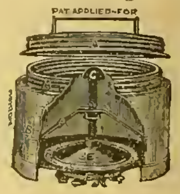
British Bee Journal

AND BEE-KEEPERS' ADVISER,

IS published every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

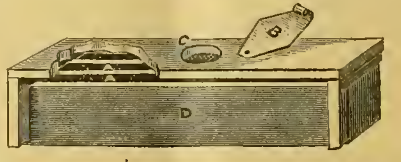
BEE-FEEDERS.

The Hasting's "Perfection" Bee-Feeder holds one quart, and the letting down of the food is regulated by a thumb-screw. The cover screws on securely. It is easy to regulate—either a quart or a spoonful can be given in a day or in an hour, as desired, and where it is needed most—over the cluster of bees. Not a drop of food need be lost, and robber bees cannot get at it.



Price, **40** cents, or one dozen for $3.50. Postage, 10 cts. extra on each Feeder. SPECIAL RATES to Dealers—Write for prices.

The "Shuck" Bee-Feeder, as here shown, may be placed at the hive-entrance, any time of the day, without danger from the robber bees. It feeds much or little, as may be wanted, and the food can be reached by the bees only from the inside of the hive.



Price, **30** cts., postpaid; by express, 25 cents each, or $2.40 per dozen.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILLS.

LOOK HERE!

BEFORE PLACING YOUR ORDER for SUPPLIES for 1891, get my Prices and Discounts.

Price-List FREE.

Address, **J. M. KINZIE,**
20Aly ROCHESTER, Oakland Co., MICH.

Mention the American Bee Journal.

HOME EMPLOYMENT. AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper. *Big Cash Premiums.* Sample FREE.
THOS. G. NEWMAN & SON,
Madison-Street, - CHICAGO, ILLS.

Mention the American Bee Journal.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

Mention the American Bee Journal.

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Oct. 18, 1890. No. 42.

EDITORIAL BUZZINGS.

A Little Time for laughter,
A little space for song—
And tears that hurry after—
Ere we, too, go along.

The Silver Wedding (25 years) of Mr. and Mrs. H. D. Cutting occurred on the 27th ult. Their friends in Clinton, Mich., (their home) took them by surprise in the evening—assumed control of their home, spent a few pleasant hours, leaving many presents as remembrances of their visit, and departed with good wishes all around. The BEE JOURNAL also extends its congratulations.

The Programme of the International Convention to be held at Keokuk on the 29th inst. will be found on another page. We hope that there will be a large attendance. The railroads refuse to give us special rates, but that cuts only a small figure. The hotels give us special rates, and the Business Men's Association of Keokuk have kindly donated the free use of the Hall of the Grand Army of the Republic (one of the finest in the city) for the convention.

The Secretary, Mr. C. P. Dadant, writes as follows concerning the convention :

> Friend Root has suggested that bee-keepers bring different sorts of honey to be tested, and also cakes and preserves made of honey, to be tried at a special dinner. We expect to be able to fix this all right, and I trust that our Western bee-men will bring us displays of various kinds.
>
> All goods addressed to me and prepaid to Keokuk or Hamilton will be delivered in the exhibition room free of charge, under my supervision. We hope our Western bee-men will strive to make this meeting as successful and as interesting as the best the association ever had. C. P. DADANT.

The Pursuit of Bee-Keeping.—As producers of honey and wax bees are of great value, but their labors in carrying pollen from flower to flower, and thus fertilizing and causing the fruit to *set and mature*, shows their greatest value in the economy of Nature.

This is shown very clearly, and argued at considerable length in the able article in this issue from Prof. Samuel Cushman, apiarist of the Rhode Island Experimental Station.

It is a portion of his report to the Agricultural Department at Washington, and is published by the Government in a pamphlet.

This will aid the pursuit of bee-keeping very much, for it shows the desirability of the cross-fertilization of flowers, and the aid rendered by insects in this work, as well as the adaptability of the honey-bee to the flowers of the most important fruit and vegetable crops dependent upon insect visits.

It also calls attention to the decision of the Supreme Court of Arkansas as to the unconstitutionality of prohibiting bee-keeping ; also to laws lately passed in Germany, which give all land owners the privilege of keeping bees anywhere ; promises protection by civil right and law, as well as punishes the destruction of bees by poison or any other way, by a fine of $150, or imprisonment for one year.

It indorses the work of the National Bee-Keepers' Union, which persistently fought for and triumphantly obtained that Decision in Arkansas !

It also shows that no one need refrain from keeping bees on account of opposition due to ignorance, fear, jealousy, or the ill-will of their neighbors, though all reasonable precautions should be taken to prevent accidents.

This shows what influence has been exerted by the Union. It protested against unjust law and conquered ! It fought with men in temporary authority, and ousted them from the offices they disgraced !

It demanded for bee-keepers their inalienable rights, and procured the best legal talent to argue the case. As a result the Supreme Court gave a Decision, which was worth thousands of dollars to the industry !

Still more, it appealed to that "Magna Charta" of our rights and liberties—the Constitution of the United States—for the rights of apiarists to pursue an honorable and peaceful vocation. Victory perched upon its banners, and the Union now says to ignorance and jealousy—"Hands off !" "No citizen shall be deprived of his life, liberty or *property* except by the judgment of his peers, and the law of the land."

☞ Among our callers last week were Mr. H. H. Brown, of Light Street, Pa., and W. M. Barnum, of Angelica, N. Y.—with both we had a very pleasant visit.

The City Board, at Plano, Ills., was warned in time by the pamphlets we sent to each member, on the Arkansas Supreme Court Decision, entitled "Bee-Keeping Not a Nuisance." The members saved themselves trouble by referring the petition of Mr. Marley to the Law and Ordinance committee, where it will be buried. The members of the committee say that no action will be taken on the matter.

The instigator, however, lets himself down easy, by averring that he "will take it to the Courts." That is just the place to have it. There we have a Decision on record, as a precedent that bee-keeping is not *per se* a nuisance !

The quiet work done by the Union is effectual ! It warns the foolish to *beware !* To the leader of an attack on apiculture it says—*Hands off !*

When the cause is a just one (and it will defend no others), it is always successful when carried to the highest Courts. Local prejudice may avail for a time, but "the majesty of law" triumphs at last, by giving to the pursuit of bee-keeping its "rights and privileges" under the Constitution, and defending its devotees in the enjoyment of them.

Friend W. F. Clarke, of Guelph, Ont., writes us that he expects to attend the International Convention at Keokuk, as the official Representative of the Ontario (Canada) Bee-Keepers' Association. He has had an attack of lumbago combined with sciatica, which lasted nearly all the summer. The lumbago seems to have left him, but the sciatica remains as his constant companion and tormentor. He is much improved, however, and will make the trip to Keokuk in the interest of health as well as to enjoy the fellowship of kindred minds. That meeting promises to be a very pleasant one.

About 60 of the bee-keepers of Southwestern Wisconsin met at the residence of E. France, of Platteville, on the 8th inst., and held an interesting convention. Several essays were read, and the subjects presented were thoroughly discussed. From the 1,600 colonies of bees represented, the average honey crop was 14 pounds. The next meeting will be held at Lancaster, Wis., in March, 1891.

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the BEE JOURNAL. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

GLEAMS OF NEWS.

The State Fair at Providence, R. I., was very successful. One of the greatest attractions was the Bee and Honey Department. It is thus described by the Providence *Journal* :

> In the old pastry room is to be found the finest exhibit of bees and products that has ever been held anywhere in the New England States, or in New York State.
>
> The space apportioned the exhibitors in this department has proved entirely inadequate to their needs and an overflow exhibit is to be found in the butter and cheese room. The exhibits show the various kinds of bees, queens, queen-cells, and the implements and supplies used in the modern methods of producing honey. Glass observatory hives to the number of 8, containing colonies, are here to be found, and in addition to these there are nine single-comb glass hives.
>
> The exhibitors are Arthur C. Miller, of Barrington, who exhibits comb honey, extracted honey of various kinds, jars of granulated honey, sun wax extractor, and implements and honey ; A. M. Cole exhibited comb honey and bees ; E. S. Bowen, extracted honey ; Thomas M. Pierce, extracted and comb honey,bees and beeswax. Dr. Merchant, of Warren, extracted honey and finely filled combs, as well as hives of bees ; John A. McCray, crates of comb honey.
>
> Samuel Lewis has a very large exhibit of extracted honey, granulated honey and comb honey ; Robert Niven, of Providence, exhibits honey in glass show cases, both comb and extracted ; William A. Green exhibits several hives of bees and instruments used in queen-rearing ; W. J. Tracy and A. C. Olney have also small exhibits.
>
> Mr. Samuel Cushman, representing the Rhode Island Experiment Station, exhibits a large number of bottles of extracted honey in the various styles of the most desirable jars for preserving the product. Mr. Cushman also brought up from the School at Kingston, a cage having a swarm of bees clustered on a branch in quite a natural style. The Experiment Station has made a collection of hives of various patterns from different parts of the country, to examine, which will be of interest to bee-keepers or intending bee-keepers.

The premiums awarded in this Department were :

> Most attractive display of comb honey, 1st, Robert Niven, Providence ; 2d, Samuel W. Lewis ; 3d, Albert M. Cole, East Providence.
>
> Samples of comb honey, not less than 12 pounds, perfection and color of comb and quality of honey to govern, 1st, Arthur C. Miller, Barrington ; 2d, A. C. Olney, Harrisville ; 3d, J. H. Merchant, Warren.
>
> Largest and most attractive display of extracted honey, 1st, Samuel W. Lewis, Olneyville ; 2d, Arthur C. Miller, Barrington ; 3d, E. S. Barnes, Providence.
>
> Samples of extracted honey, not less than 12 pounds, quality, body, flavor and color considered, 1st. J. M. Merchant, Warren ; 2d, Mrs. S. M. Lackey, Providence ; 3d, Thomas M. Pierce, Wickford.
>
> Best display of granulated honey in glass, 1st, Mrs. Lackey, Providence ; 2d, Samuel W. Lewis, Olneyville ; 3d, Arthur C. Miller, Barrington.
>
> Best display of not less than 5 pounds of beeswax produced by exhibitor, 1st, Mary E. Ralph, Hope ; 2d, Arthur C. Miller, Barrington ; 3d, Thomas M. Pierce.
>
> Best display of Italian bees and queen in single-comb observatory hive, 1st, A. M. Cole, East Providence ; 2d, Arthur C. Miller ; J. M. Merchant.
>
> Best display of Carniolan bees and queen in single-comb observatory hive, 1st, Arthur C. Miller.
>
> Best display of queen-cells and attendant bees in single-comb observatory hives, cells to mature during the Fair. 1st, Thos. M. Pierce ; 2d, J. M. Merchant ; 3d, A. M. Cole.
>
> Best colony of bees, 1st,Arthur C. Miller; 2d, J. M. Merchant ; 3d, W. A. Greene, Providence.
>
> Best complete hive for comb honey, 1st, J. M. Merchant ; 2d, Robert Nivens ; 3d, Thomas M. Pierce.
>
> Best complete hive for extrated honey, 1st. A. M. Cole ; 2d, Thomas M. Pierce ; 3d, J. M. Merchant.
>
> Largest and most useful collection of bee-keepers' instruments and supplies, 1st, R. Nivens.
>
> Best new apiarian instrument exhibited by inventor, diploma, Arthur C. Miller.
>
> Best honey extractor, 1st, Robert Nivens ; 2d, A. M. Cole.
>
> Best wax extractor, premium, Arthur C. Miller.
>
> Best honey-vinegar, not less than a quart, premium, Samuel W. Lewis.
>
> Sweepstake for best exhibit in this division, exclusive of implements and supplies, society's diploma, Arthur C. Miller.

La Grippe again appears and claims its victims. It is early, and will no doubt reap a large harvest before next summer. Already quite a number of cases are reported among bee-men—the latest being our friend J. M. Hambaugh, of Spring, Ills., who reports thus :

> I was taken down sick about Sept. 8, since which time I have scarcely been able to leave my room, and a goodly portion of the time I have been bedfast. My malady is *La Grippe*. I have had to subdue the fever on myself twice, and though my physician pronounces me better, I am still quite feeble.

We well known how to sympathize with friend Hambaugh and others who have had a visit from that very disagreeable malady. It takes four months to get over its attack, and we hope never to have another such a tussel. It weakens the constitution, destroys the energy, and makes life a burden.

Honey Shower.—The San Bernardino *Courier* gives the following "story" about a honey shower, which it claimed was seen and felt in a dry canyon in Southern California. The *Courier* also calls it "manna." "What was it ?" or "Did anything like it ever occur ?" That's the question. It says :

> Two days ago five gentlemen of this place drove away in a carriage, taking with them guns and cooking utensils. Bringing up about noon near a spring in a dry canyon, they kindled a fire for preparing lunch. As soon as frying-pan and coffee-pot began doing duty over the burning fagots, honey in lumps from the size of drops to gobs larger than human fists—rained or fell into frying-pan or coffee-pot, sweetening cooking game and boiling coffee-water.
>
> The startled Nimrods found that as the fire was reduced the honey-shower also diminished, and ceased entirely with its subsidence.
>
> Not having vessels for saving the honey, the "favored-five" discoverers of this remarkable phenomenon decided to revisit the place a few days hence for conveying away in proper vessels the falling manna, of which they expected to secure quite a lot.

Full Height of Cells in comb foundation has been announced in Germany, as will be seen by the following item from the *Bienenvater aus Boehmen*, translated for us by the Rev. S. Roese :

> What bee-keeper has not expressed the wish that a machine might be invented which would manufacture foundation in its natural size and height of cells ? Such a machine was constructed a few years ago, but the instrument proved too expensive and impractical, and the matter was dropped and forgotten. Although the readers of the *Bienenvater* have, up to date, never read an article from my pen in their paper, yet I cannot refrain from making known to them the greatest discovery since the days of Dzierzon. It is for the general interest of the bee-keeping world, to know,as soon as possible, that a machine has been invented, which will make foundation comb, with cells 20 millimeters high.
>
> When the inventor of this machine—Herr Caccan Beyer, of Olbernhon, Saxony—informed me of this invention, I believed it to be a humbug, and many a reader of this paper will express himself the same way ; but I guarantee that it is the honest truth.
>
> The "Edi Comb Foundation" is the name for the new foundation, which will cause a thorough revolution in the manufacture of foundation comb. G. ADOLPHSON.
>
> Wytigon, Zurich.

Similar announcements have been made in America by Weed Bros., but every time a test has been made a failure is the result, with a promise of a success the next time.

But we would ask, of what possible value can such an "invention" be to apiarists ? The simple fact that it must be boxed for shipping a few sheets at a time, would practically make it valueless.

G. W. Ingram, of Tempe, Arizona, has a bee-ranch and apiary for sale at a bargain.

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

The International Convention will be held in the G. A. R. Hall, Estes House, Keokuk, Iowa, Oct. 29, 30 and 31, 1890.

PROGRAMME.

First Day—Wednesday, Oct. 29.

9:00 A.M.—Call to order. Reception of new Members. Payment of Dues. Appointment of Committees for Question-Box and other purposes.

10:00 A.M.—Address of Welcome—J. E. Craig, Mayor of Keokuk.

RECESS.

11:00 A.M.—"Fifty Years' Progress in Apiculture."—Thomas G. Newman, Editor of the American Bee Journal, Chicago.

QUESTION-BOX.

1:30 P.M.—"Apicultural Journalism."—W. Z. Hutchinson, Editor of the Bee-Keepers' Review, Flint, Mich.

DISCUSSION.

3:00 P.M.—President's Address.—Hon. R. L. Taylor, Lapeer, Mich.

3:30 P.M.—"Honey Pasturage of the United States."—A. I. Root, Editor of Gleanings in Bee-Culture, Medina, Ohio.

DISCUSSION.

QUESTION-BOX.

7:00 P.M.—"Apiarian Exhibit at the Coming Chicago International Fair."—Dr. A. B. Mason, Auburndale, Ohio.

DISCUSSION.

QUESTION-BOX.

Second Day—Thursday, Oct. 30.

8:30 A.M.—"What I don't know about Bee-Keeping."—Dr. C. C. Miller, Marengo, Ills.

DISCUSSION.

11:00 A.M.—Condensed Reports of the Affiliated Associations in regard to Crops and Prospects.

QUESTION-BOX.

1:30 P.M.—"Is it best to use full sheets of Foundation in Brood and Surplus Frames?"—Eugene Secor, Forest City, Iowa.

DISCUSSION.

3:00 P.M.—"Fixed Frames versus Suspended Frames."—Ernest R. Root, Medina, Ohio.

DISCUSSION.

7:00 P.M.—"The conditions necessary to insure a Honey Crop."—Prof. A. J. Cook, Agricultural College, Mich.

DISCUSSION.

QUESTION-BOX.

Third Day—Friday, Oct. 31.

8:30 A.M.—Business of the Association. Secretary's and Treasurer's Reports. Election of Officers.

11:00 A.M.—"In an Apiary run for Honey only, are Italians or Hybrids preferable?"—C. F. Muth, Cincinnati, Ohio.

1:30 P.M.—Volunteer contributions from different sources.

3:00 P.M.—"The International Bee-Association. Its past and future."—W. F. Clarke, Guelph, Ont., Canada.

The Question-Box Committee will receive questions at any time, and will appoint different members to answer those that are deemed of sufficient interest or importance.

As this is the first meeting of this International Bee-Association held West of the Mississippi, it is hoped that the Western bee-keepers will make an effort to show what the West can do. A number of ladies are expected, as usual. The essayists named in the programme will nearly all be present.

A special room on the same floor as the G. A. R. Hall, has been secured for exhibits of bees or their products, or implements, and a special committee will report as to their merits. Articles for exhibition, if prepaid to Keokuk and addressed to the Secretary, will be delivered in the proper place free of charge.

The Hotel Keokuk, one of the best hotels in the West, a $3.00 house, will take members at $2.00 per day. The McCarty Boarding, in the Estes House, on same floor as the G. A. R. Hall, will board members at $1.00 per day.

Parties wishing to attend will be freely furnished all necessary information. Reduced Railroad Rates are not to be had.

C. P. DADANT, Secretary,
Hamilton, Ills.

Autumn and the Bees.

Written for Scribner's Monthly
BY DUNCAN C. SCOTT.

Sing me a song of the autumn clear,
  With the mellow days and the ruddy eves;
Sing me a song of the ending year,
  With the piled up sheaves:

Sing me a song of the apple bowers,
  Of the great grapes the vine-field yields,
Of the ripe peaches bright as flowers,
  And the rich hop fields.

Sing me a song of the fallen mast,
  Of the soft odor the pomace sheds,
Of the purple beets left last
  In the garden beds.

Sing me a song of the toiling *bees*,
  Of the long flight and the honey won,
Of the white hives under the apple trees
  In the hazy sun.

Sing me a song of the thyme and the sage,
  Of sweet marjoram in the garden gray,
Where goes my love Armitage
  Pulling the summer savory.

Sing me a song of the red deep,
  The long glow the sun leaves,
Of the swallows taking a last sleep
  In the barn eaves.

QUERIES and REPLIES.

How Long from a Capped Cell Until the Queen Lays?

Written for the American Bee Journal

QUERY 734.—If a colony has a capped queen-cell, and no queen, and did not swarm when the queen-cell hatched, how long would it be until there ought to be eggs in the combs?—F.

Usually 8 or 10 days.—A. B. MASON.

In about 12 or 15 days.—J. P. H. BROWN.

From 14 to 20 days.—A. J. COOK.

She certainly ought to be laying in a week after emerging from the cell.—EUGENE SECOR.

A queen usually commences to lay when she is from 8 to 12 days old.—G. M. DOOLITTLE.

Six to 12 days, according to the more or less maturity of the sealed queen.—DADANT & SON.

Sometimes 8 days from the time the young queen hatches, oftener 10, and sometimes 16.—C. C. MILLER.

There ought to be eggs in the combs in from 10 to 12 days after the queen hatches.—C. H. DIBBERN.

It would be from 8 to 12 or 14 days. It depends upon what stage of development the capped queen cell is in.—JAMES HEDDON

That would depend upon how long the cell had been capped. Eggs should be found in from 8 to 15 days after the cell hatches, owing to the weather.—R. L. TAYLOR.

Sixteen days from the egg to the perfect queen; ordinarily the queen should be laying in two weeks after she is hatched.—MRS. L. HARRISON.

Much will depend upon the weather and other conditions. Under favorable conditions, there ought to be eggs in from 8 to 12 days from the time the queen hatches.—M. MAHIN.

The queen-cell, if just capped, would hatch in about 8 days; in 6 days she may mate, and in two days more be laying. This would be the shortest possible time, in my experience.—G. L. TINKER.

In the case you mention there ought to be eggs discovered in the combs, if the search for them is carefully made, on the 10th or 12th day after the cell hatched. Young queens usually begin to lay eggs at about 10 days old.—G. W. DEMAREE.

There is some considerable latitude in this query. As I understand the question, it will depend wholly upon the length of time it takes the queen to mate. Usually 4 or 5 days. Viewing the question from another point, it might be from 8 to 10 days.—J. E. POND.

From 8 to 10 days from the time the queen is hatched, we generally see the first eggs; but as it often depends upon circumstances, it may be longer. If after 10 days you see no eggs, and cannot find the queen, give a frame of eggs and young brood, and if no queen, the bees will start cells, etc.—P. L. VIALLON.

That depends upon how long the queen-cell has been capped, and the success attending the wedding-flight of the queen. Usually she will lay her first eggs when she is from 8 to 10 days old.—THE EDITOR.

Silk Paper in Hives.—A correspondent from Iowa wrote as follows to the Chicago *Herald*:

Inclosed find piece of something that was formed on the inside of the cap of a bee-hive that was standing empty. Nearly the whole inside of the cap was covered with it, and it peeled off easily. I would like to know what it is, and how it was formed.

J. F. B.

It was submitted to Prof. G. A. Forbes, the Illinois State Entomologist, who replied thus:

The very curious specimen sent by your Iowa correspondent is a delicate, unsized silk paper, formed apparently by some spinning insect whose web is much finer than that of the silk-worm. The bees themselves cannot have made this paper, as they spin only in the larva or maggot state when inclosed, helpless, in their cells.

The bee-moth is a great spinner of a very fine web, and is a common pest of neglected hives, but I do not know that it ever makes any such a smooth and continuous tissue as this. G. A. FORBES.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. FEHR, Sec.

☞ The Missouri State Bee-Keepers' Association will meet at Mexico, Mo., on Oct. 22 and 23, 1890. A good programme, and an instructive and interesting time are expected. All are invited to attend. Board can be obtained for 75 cts. per day, or 20 cts. a meal.
J. W. ROUSE, Sec., Mexico, Mo.

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

CORRESPONDENCE.

QUEENS.

The Introduction of Queen-Bees in the Fall.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

Many seem to think that it is next to impossible to introduce queens in the fall, after brood-rearing has ceased for the season, as my correspondence has shown during this season of the year, for years past, as I am often asked if it would be wisdom to purchase queens in September and October to replace old and worn out queens; for, say they, "There will be much risk to take in trying to introduce queens at this time of the year."

Now all of my experience goes to prove that queens can be introduced more easily in the months named above than at any other season of the year. When it comes to finding the old queen, this is more easily done when she is laying, but after she is found, the new queen can be introduced with a certainty not always apparent at other seasons of the year.

At this season of the year there is no hurry, from the desire to have the queen go to laying as soon as possible, as is the case during the spring and summer months, for we do not expect that she will lay any for the next three months, no matter how soon she may be accepted; hence she can stay caged for an indefinite period without harm to either herself or the colony she is to preside over. For this reason, I most generally use the following plan:

Take a piece of wire-cloth having 14 meshes to the inch, cutting the same so that it is 4½ inches wide by 7½ long. From each of the four corners, cut out a little square which shall be ¾-inch on all sides. Next get out a block 3 inches wide by 6 long, and after having placed it in the right position on the wire-cloth, bend up each of the four sides around the block so that you will have a box, as it were, of the wire-cloth which will be 6 inches long, 3 inches wide, and ¾ inches deep. Now unravel four wires from each of the four sides, when you will have a cage that is the most handy in introducing queens of anything which I know of.

Having removed the old queen, and having the one to be introduced, in a small, round wire-cloth cage, shake the bees all off from one of the central combs in the hive, when the new queen is allowed to run on this comb and the introducing-cage placed over her in such a position that a part of it will be over some unsealed honey. If the queen's wing is not clipped, take the comb into a room in letting her on the comb.

Now press the points of the wire-cloth, which were made by unraveling the sides, into the comb till the horizontal wires touch the surface of the comb, seeing that the corners so come together that the queen cannot get out, nor any outside bees get in, when the frame is to be put back into the hive, leaving the frame next to it off far enough so that there will then be a bee-space between the cage and this last-named comb.

The hive is to be closed now, and left from a week to two weeks, according to the weather, as there is no need of opening the hive on any certain day.

On some moderately warm day when the hive can be opened without danger of chilling the bees, and when it is not so warm that robbers will be troublesome, remove the frame having the cage on it, and lift the cage from over the queen, allowing her to go where she pleases. . As the bees have no material from which to rear a queen, they must accept the one given them, and under such circumstances I have known one to be killed, and I have practiced this plan more or less for the past ten years.

UNITING WHEN INTRODUCING.

If the queens to be introduced are in your own yard, and you wish to unite two or more colonies at the same time, I find there is no trouble in putting the colonies together on any cool, cloudy day, when the bees are not flying. In uniting in this way, the inferior queens should be disposed of a few days previous to the uniting, and all the combs taken away from each which are not wanted in the hive where the united colony is to remain. In other words, allow only as many combs in the different hives as will go into one hive. The combs having the queen with them, should be placed close to one side of the hive, while those that are to be carried to this hive when uniting, should be left in the middle of the hive, and somewhat spread apart so that when you come to carry these latter combs, the bees may all be clustered on them, rather than on the sides of the hive.

Now by means of all of the fingers, or some other device, raise all the combs at once, so as not to break the cluster of bees, and put them in the other hive, right by the side of those already there, and so on until you have all in you wish. After closing the hive, remove the hives and bottom-boards which have been emptied, piling them away for the time being, so that the "old home" will not be there when the bees fly the next time, and you will have no trouble about the bees going back to their former location. To be sure, some will fly about over the place, but so far as my observation goes, these all return to the united colony, upon not finding any hive on their old stand.

I consider this the easiest and best plan of fall introduction of queens, and the uniting of colonies at the same time, of anything I have ever tried.

ANOTHER WAY OF INTRODUCING.

There is another plan of introducing queens which I have practiced with good results, which is as follows: When a queen is expected to arrive in two or three days, I go to the hive which is to receive her, and remove the old queen, keeping her so that she may be used in any case of emergency, until I am sure she will not be needed, when she is killed.

When the new queen arrives, I take out the central frame, or the one having the most bees upon it, and set it down outside of the hive, and place the queen among the bees, keeping watch of her. If the bees treat her kindly, I take another frame from the hive, and put it bee-space from the first, so that the queen is between them, leaving them thus for about an hour, and going to them occasionally and opening the frames to see that the queen is not balled, which thing does not happen one time in ten. The frames are now lifted together and set in the hive, when all is well.

Should the queen be balled, she must be liberated and caged as in the first plan. In times of robbing, do this work just at night, so as to avoid it.

Borodino, N. Y.

INTERNATIONAL.

Shall It Meet at Lake George, N. Y., in 1891?

Written for the American Bee Journal
BY J. H. LARRABEE.

I was much pleased to notice, on page 647, the suggestions by Mr. Ernest R. Root, as to the location of the International Bee-Association for 1891. I might perhaps be accused of having a personal interest in advocating Lake George as a place of meeting, but as Mr. Root has introduced the subject, and, as he as a "foreigner" was so well pleased with the place, perhaps I may be excused for supplementing his suggestions with some others which occur to me as reasons why a grand meeting of our greatest bee-association could be held on the shores of this lake.

The fame of Lake George is world-wide. Its Indian name of "Horicon," and its French Jesuit name of "St. Sacrament," are more expressive of its beauty than its English name. The gray granite mountains, whose grim faces and ragged crests are toned and softened by the varied green of its forest coat, plunge down directly into the crystal water, or, as though fearful of their own images in those mystic depths, have retreated back from the water's edge just far enough to afford the most enchanting spots for hotels, country villas and parks. Every genuine bee-keeper is a lover of nature, and to him this spot is full of food for enjoyment. Rev. Joseph Cook, the great Boston Monday lecturer, has erected a summer house upon one of these rocky heights, and has placed this sentiment in a conspicuous place: "Here let every honest American sit down, look about him, thank God, and take courage." The surface of the lake is dotted with scores—yes, hundreds—of the most beautiful wooded islands. These islands are owned by the State, and it is misdemeanor to even cut a tree or bush thereon; thereby is preserved their virgin beauty.

Now as to accommodations and mode of access to the place: There are scores of first-class hotels along its shores, open only during the summer season, and as the association ought to meet about Sept. 20, almost any of them would be glad of so much extra patronage to round out the short season, even at much reduced rates. The Lake is, at Caldwell, the southern end, connected by rail with Albany, only about 50 miles distant. At the northern end, it is also connected by rail with the main line of the Delaware & Hudson railroad—the direct route between Albany and Montreal. Two large steamers ply on the Lake during the season.

Should the meeting be held here, it will not only draw a large attendance from Vermont, Massachusetts and New York, but also from Maine and from Eastern Canada many would come. During the season of summer travel, excursion round-trip tickets are sold from all the principal points to this summer resort.

Should it be decided to hold the meeting east of Buffalo, I think that no more "drawing" place could be chosen, partly from its natural attractions, partly from its convenience of access, and partly from the very novelty of the idea of holding a bee-keepers' convention at such a place. Come to this "Como" of America, and we will do our humble best to afford an enjoyable time to all.

Larrabee's Point, Vt.

MARKETING.

Importance of Having Honey in Good Condition.

Written for the American Bee Journal

BY J. W. TEFFT.

Honey, if placed on the market only half cured, and unripe, or in soiled sections, in crates and jars, pails, cans or paste-board boxes, generally spoils the market for weeks thereafter. People buy such honey because it looks passably well, and try it, then pronounce it unfit to eat, which is the truth, and they cannot be induced to buy again for sometime. Wait, therefore, as a matter of policy, as well as principle, until after you are sure there is no leaky or soiled packages, and sections well cleaned of propolis, and you are really sure the honey is ripe and fit to eat. Follow this rule implicitly with late fall honey also, then whoever buys of you will buy again, and the whole family will be eager for more and more, as the season advances, and the consumption will be greatly increased, and prices maintained.

This is a substantial gain, for all ripe honey, ripened by the bees, will weigh more than unripe honey, and is less likely to shrink and shrivel or sour, as unripened honey taken from the bees only a day or two after begins to present a watery, sickly appearance.

It may truthfully be asserted that, as a general rule, unripe honey is the principal cause of the gluts in the market. There is no excuse for shipping soiled, unripe honey at the opening of the season, or any time thereafter; with proper distribution of shipping, and by shipping in reasonable amounts, no market glut can long continue, if the honey is of good quality.

Gathering honey should always be done on a warm, dry day, and the packing-trays kept clean, neat and dry—they should not be allowed outside the packing-house, or other shelter. If the honey is being gathered for table use, too much care cannot be exercised in removing the propolis, and handling the sections so as not to break the cappings, or mar them in packing, taking all imperfect sections to sell as second grade.

The same constant care is requisite in order that they may go into shipping-crates as nearly perfect as possible, and reach the consumer in the very best condition and order. Good, ripe honey in clean crates will exclude all unripe or soiled honey. Inferior honey should be packed and shipped as second grade.

We are aware that this year's crop of honey was small, and should command a high price, provided that the honey is ripe, and of good average quality, being properly gathered and packed; then sending none but ripe honey to market, and not being in a hurry to rush all to the front as soon as fit to ship, the honey-producer who has any surplus honey, will gather a harvest from the bees this year.

Buffalo, N. Y.

ORANGE-BLOOM.

Honey Secured from Orange-Blossoms in Florida.

Written for the American Bee Journal

BY M. D. FISHER.

I notice on page 644, an article on "orange-blossom honey." I wish, by way of emphasis, to add to the testimony of Mr. Crutcher, in reference to the possibility of obtaining exclusive orange honey. I have extracted it when it was being brought in in such abundance, that with equal propriety one might ask whether linden or white clover ever secretes nectar in quantities sufficient for identification.

As to quality, to my sense of taste the flavor of this honey is as superior to any other, as to my sense of smell. The aroma of the orange-blossoms is superior to that of all others—an aroma so dense and penetrating that the bees from remotest regions are apprised of these "El Doradoes" of bloom—the orange-groves.

Orange and palmetto are the principal sources from which nectar is obtained in locations away from the coast, but on the Atlantic coast the mango tree furnishes honey in such abundance, that apiculture is made an exclusive avocation, vying with orange-growing, and truck-gardening as a means of profit.

In reference to Florida as a bee-keeping State, my advice would be, consider before exchanging a latitude where all vegetation has a period of dormancy, for a land of continual bloom. To the novice, this advice would seem ridiculous, but, to Mr. Crutcher, doubtless my meaning is apparent.

Perhaps Mr. Crutcher, or some other apiculturist will give the readers of the BEE JOURNAL some information on this subject: What is the effect of the energies of the queen, and the general condition of the colony, when small quantities of honey are being continually brought in, as is the case in Florida after the orange and palmetto yield?

Allen's Hill, N. Y.

BEES AND FRUIT.

The Fertilization of Plants by Bees.

Report of U.S.Department of Agriculture
BY SAMUEL CUSHMAN.

We do not hesitate to claim that the honey and wax crop is not the most valuable result of bee-keeping, but that the principal value of bees to man is their work of carrying pollen from flower to flower.

That they do this is generally overlooked, or the fact when known is undervalued.

Naturalists tell us that honey is Nature's bait by which bees are induced to take and distribute the fertilizing material. While pollen is distributed among certain blossoms by both insects and the wind, others are so shaped as to be wholly dependent upon the visits of bees.

"The bee takes to give honey but a fraction of her labors. Man has timely help that he knows not of."

INSECTS AND PLANT FERTILIZATION.

(Introduction by the editor of the *American Agriculturist*, to six articles on the above subject, which commenced in that publication, May 1866.)

"The part played by insects in the fertilization of flowers, *i. e.*, in the carrying of the pollen, or fertilizing dust from the anther which produces it to the stigma or that part of the pistil designed to receive it, is a subject now receiving much attention at the hands of naturalists.

"It not only affords an interesting study to the curious observer, but the fact itself is of importance to the cultivator, as some of our products depend upon the aid of insects for their perfection, and *probably the fruitfulness of many of them is largely influenced by the abundance or scarcity of bees and other honey and pollen seekers*. Prof. Gray, of Harvard University, the distinguished botanist, has consented to give us, in a series of articles, his observation upon the relation of insects to plants."

We quote from Prof. Gray's articles:

"This sweet matter which flowers so generously produce is, so far as we know, of no direct use to the plant. That insects, in visiting flowers for honey, accidentally or incidentally aid in fertilization, by carrying pollen from anther to stigma, is familiarly understood."

"We cannot resist the conclusion that the aid of insects is, so to say, counted upon, that the blossoms are furnished with honey in order that they may attract insects."

"Why should insects be called in to do that which, by a little different arrangement, would be done by the flower itself ?"

"The key to the solution of the riddle he (Charles Darwin) found in the principle, recognized by breeders, that close breeding tended to sterility and debility, while cross breeding among different individuals of the same species avoids this tendency."

"A bee cannot take the honey from an Iris flower without carrying off on its rough head some pollen from the anthers it must rub against. It cannot well take the honey from the next flower of the sort it flies to without depositing some of this pollen on the stigma as it seeks its feeding place." Speaking of orchids, he says: "To cross the flower of the species is plainly the object of the whole contrivance, and an admirable contrivance it is, by which winged insects are solicited to do the work for sedentary flowers.

"Most of our common, brightly colored blossoms, and many that are not at all showy, plainly reveal on inspection their adaptation to cross fertilization by the aid of insects."

"We need not multiply examples. Every garden and every field offers equally good examples—lessons which anybody may read and understand if he will only open his eyes."

"Are all flowers then, it may be asked, aided by insects in the essential business of forming seeds? By no means. In many cases the transport of pollen is left to the winds. Such flowers produce no honey, nor anything attractive to insects, and such flowers, we may add, have no showy corolla. So we may conclude that corollas, or bright colors in any part of the blossom, and also fragrance, are given to plants in order that they may attract insects, and be aided by them; an aid which many of them are absolutely dependent on."

"Pines, spruces and the like, are left to the wind to fertilize."

"Grasses and grains also depend upon the wind, and have accordingly a vast excess of pollen."

"No plant is known in which at least an occasional cross-breeding is not provided for.". . . . "The pollen is powerless, or nearly so, upon the stigma of the same flower, but is efficient upon the stigma of neighboring flowers; and that breeding in and in, which seemed unavoidable from the structure of the blossom, is here prevented only by the differentiation of the pollen and stigma."

The following is from Silliman's Journal, 1862: "We all know how essential plants, and especially their flowers, are to the existence of the multitudinous swarms and tribes of insects, but it is hardly understood that the benefit is reciprocal—that in the long run, insects are also essential to the continued existence of many, if not of most species."—*Prof. Asa Gray.*

"In by far the greater number of flowering plants we find both the male and female element in the same flower, or, in other words, such plants are hermaphrodites. One would naturally suppose that there could be but one object in thus placing the sexual elements in such immediate juxtaposition, namely, that each pistil might be fertilized by its own pollen or male element. Late researches have, however, made it evident that often among plants, the nuptials cannot be celebrated without the intervention of a third party, to act as a marriage priest; and that the office of this third party is to unite the representatives of different households. To be specific, seed capsules are most productive when their ovules are fertilized by pollen from another plant or flower of the same plant. Breeding in and in can by absolute experiment, be proven to produce a degenerate offspring in the vegetable kingdom no less than in the human race. Now the marriage priests who officiate are insects in search of honey, the winds, or anything which by accident or design may carry the pollen from one flower to another."—*J. F. Rothbeck, American Naturalist, 1868.*

"Mr. Charles Darwin and other botanists have proved beyond a doubt, that some flowers, in which pollen may easily gain access to the stigma of the same flower, are sterile unless fertilized by pollen borne from other flowers, while many are much more productive by a cross fertilization.

"Bees are willing agents here, as in other instances, alighting first on the stigma of the oldest flowers, which are farthest down the stem, and then passing up to others which are younger. Besides collecting nectar at the bottom of the flower, they collect the pollen by scraping the style upon each side with their legs, and when calling at the next flower, first strike the exposed stigma, leaving a few little morsels as tribute for the bountiful supply."—*W. J. Beal, on "Agency of Insects in Fertilizing Plants," American Naturalist, 1868.*

"THE GREAT IMPROVEMENT OF THE STRAWBERRY

has been brought about by cross-fertilization and selection of the best of each kind. Nature apparently is not willing to develop a luscious receptacle or berry unless she in turn can use it as a resting place for seeds."—*Minnesota Experiment Station Bulletin.*

"Orchards in which bee-hives are placed bear heavier crops than those not thus favored. Bees are in Europe profitably introduced into peach houses in order to effect the pollination of the flowers."—*Packard's Entomology for Beginners.*

At one time, we are informed, a person living in Pawtucket, attempted to grow strawberries under glass. He raised plenty of vines and blossoms, but they produced no fruit. Some one who knew, told him why, and when bees were procured the blossoms matured and produced fruit.

It is said that if strawberry blossoms are covered with fine muslin they drop off instead of maturing, but if fertilized artificially by hand they mature. Some of the best bearing varieties of strawberries only produce female blossoms or pistils, the Crescent Seedling being an example, therefore growers of this fruit have one row in every seven of a kind having an abundance of pollen, and that blossoms at the same time.

WHEN RED CLOVER WAS FIRST BROUGHT INTO AUSTRALIA,

although fine crops were raised, with plenty of blossoms, no seed could be secured. At last some one sent to England for "bumble-bees."

They were procured in winter, while dormant, by Mr. Abbott, a prominent English bee-keeper; were sent in that condition, and successfully introduced. As soon as they became plenty there was no further trouble in securing a full crop of seed.

Honey-bees work on second crop in this country at times.

Prof. Lucas, a celebrated pomologist in Germany, says: "A careful and observant bee-keeper at Potsdam writes to me that his trees yield decidedly larger crops since he has established an apiary in his orchard, and the annual product is now more certain and regular than before, though his trees had always received due attention."—*American Bee Journal.*

FERTILIZATION OF APPLE-BLOSSOMS.

Frank Cheshire says that in each apple matured, five fertilizations have been necessary. If none are effected, the calyx which forms the flesh of the fruit, instead of swelling, dies and soon drops. If some parts are fertilized those parts only develop, making a deformed fruit, and it rarely hangs long enough to ripen; becomes a wind-fall; also that gooseberries are absolutely dependent upon insects for fertilization, and the failure of this crop is not so uniformly the result of frost as some suppose, but from cold weather at the critical time, preventing the visits of bees. He believes the present development of the perfume, nectar secretion, size, and beauty of flowers are the results of repeated insect selection.

IMMEDIATE EFFECTS OF CROSS-FERTILIZATION ON THE FRUIT.

Not only do the highest authorities claim that insects are of the utmost importance for the fertilization of many fruits, seeds and vegetables, but that the fruit is in many cases immediately affected favorably or unfavorably according to the source of the pollen, thus guiding whatever feeds upon the fruit to select that having the seed best fitted for propagation.

"Among strawberry growers it is widely believed that the berries of pistillate varieties will vary in character according to the staminate variety which furnishes the pollen. As many of the best varieties of strawberries are pistillate, and require to be fertilized by some perfect flowered variety, it becomes important to know with certainty whether such influence exists or not."—*A. A. Crague, U. S. Agricultural Report.*

Chas. Darwin, Dr. Gray, D. M. Ferry and others admit the possibility of this. Others believe that the more plenty the pollen the greater this influence.

"I have always thought that the more abundant the pollen, and consequently more perfect pollinization afforded by some varieties, had as much to do with the result as any true effect of the cross fertilization."—*F. S. Earle. U. S. Agricultural Report.*

"We know it is claimed by some that peas and beans are self-fertilized, but we have learned that they are not always so, to our cost.

"A shower of rain washes away the pollen, and our apple crop fails in consequence. The young fruit does not swell, but shrinks and falls."...... "It is believed that the pollen affects the tissue of the fruit itself."...... "Where then shall we limit the action of the fertilizing element of the pollen? I am inclined to believe that it really has no limit, but that it is capable of extending through the whole plant."—*D. M. Ferry, Detroit, Mich., U. S. Agricultural Report.*

As Cheshire expresses it, bees are not only florists, but fruit producers, and the nectar and pollen is simply the fee paid for the professional service of the little inoculator.

Bumble-bees, wasps, butterflies and many other insects by day, as well as moths and the various insects of the night, do much of this work. They, however, must take their chances of surviving winter's cold or summer's wet, or drouth with its scarcity, and may be terribly thinned out in consequence.

Honey-bees, which are doubly man's friend, may by him be fed and protected as well as bred in any quantity, and taken wherever they may be needed.

They seem to best suited to the flowers of our most important crops needing insect help.

"In Herman Muller's celebrated work (German), 'Fertilization of Flowers by Insects,' there is a full description of 338 species of plants that are proved, by careful observation of many years, to be visited and fertilized by insects. This is about one-fifth of all the plants flowering in the open country in Germany. *The honey-bee alone visits 194 species*, being half the number of plants examined."—*British Bee Journal.*

DO BEES INJURE FRUIT?

Prof. Riley, speaking of the many insects injurious to vegetation, and the few that are beneficial, says, "The ability to distinguish between friend and foe is of the first importance in coping with the latter, for it is a notorious fact that the farmer often does more harm than good by destroying the former, in his blind efforts to save his crops."—"*General truths in applied Entomology,*" *U. S. Agricultural Report*, 1884.

He says in a later Report, 1885. "Apiculture as an important branch of economic entomology, deserves attention, and there are some questions which this department can, perhaps, better consider than private individuals or associations. Mr. Nelson W. McLain was, therefore, appointed as special apicultural agent of the divison." June 1, 1885.

One of the various subjects given for investigation was, "To obtain uncontestible results by intelligent experiment on scientific methods, as to the capacity of bees under exceptional circumstances to injure fruit, *i. e.*, to set at rest the ever discussed question of bees *vs.* fruit." As to results of these investigations, he says, "The experiments show conclusively that bees do not injure fruit at first hand, and this fact is in keeping with the structure of the mandibles as compared with those of wasps which are generally charged with the real injury."—*C. V. Riley in Report of the Entomologist. U. S. Agricultural Report*, 1886, *page* 211, 212.

Hives of bees were confined to a bee-proof building, made so by enclosing its open sides with wire-cloth. Plates of grapes, peaches, pears and plums, varying from green to dead ripe, were placed on shelves in this enclosure. The bees were then deprived of stores, and left with the exposed fruit as their only relief from hunger, thirst and starvation. We extract the following from Prof. McLain's Report, page 337, 1885.

"They daily visited the fruit in great numbers, and labored diligently to improve the only remaining source of subsistence. They inspected and took what advantage they could of every opening at the stem or crack in the epidermis or puncture made by insects which deposit their eggs in the skin of grapes. They regarded the epidermis of the peaches, pears, plums and other fruits having a thick covering simply as subjects for inquiry and investigation, and not objects for attack.

If the grape-skin be broken or removed, they will, in the case of need, lap and suck the juices exposed. The same was also true of the grapes, if the skin was broken by violence or burst on account of the fruit becoming over-ripe; the bees lapped and sucked the juices from the exposed parts of grapes and stored it in cells for food. They made no attempt to grasp the cuticle of grapes with their mandibles, or with their claws. If the grapes were cut open or burst from over-ripeness, the bees would lap and suck the juices from the exposed segments of the grape until they came to the film separating the exposed and broken segments from the unbroken segments. Through and beyond the film separating the segments they appear to be unable to penetrate. I removed the outer skin from many grapes of different kinds, taking care not to rupture the film surrounding the pulp. When these were exposed to the bees, they continued to lap and suck the juices from the outer film until it was dry and smooth as was the film between broken and unbroken segments. They showed no disposition to use their jaws or claws, and the outer film as well as the film between broken segments remained whole until the pulp decayed and dried up."

"After continuing the test for thirty days we sent to Michigan for varieties not obtainable here," another colony of Italian bees were added to the rest, and twenty varieties of grapes being exposed upon plates and suspended from the rafters. "The conditions naturally prevalent during a severe and protracted drouth were again produced, and the test again continued for 25 days." "The bees showed no more capacity or disposition to offer violence to one variety of grapes than another. No more attention was given the thin skinned varieties than the thick skinned. As long as the skin remained whole they did not harm the grapes. When the skins were broken by violence, such as by cutting or squeezing, the juices exposed were appropriated.

The extent of damage the bees could do to grapes which burst from over-ripeness, depended on the extent of the rupture in the film surrounding the pulp. A wide rupture may be made in the epidermis, or it may be removed, and if the film is unbroken the pulp remains whole. The film seldom bursts until the grape is about to decay, or has begun to decay, and then the grape is of little value."

Page 338. "Many erroneously suppose that bees sting the grapes. Bees never sting except in self-defense, or in defense of their homes from real or imaginary danger."

"The evidence then shows that bees do not injure perfect fruit. We have observed that they give no attention to the puncture and blight caused by the ovipositing of other insects, until after the larva is hatched and decay has set in, and then only in cases of extremity.

"The circumstances under which bees appear to be able to injure grapes are very exceptional. That they will not molest or even visit grapes when it is possible to secure forage elsewhere is certain. It also appears certain that they never attempt violence to the skin of grapes. The capacity of bees to injure over-ripe grapes is limited by the extent to which the juice and pulp are exposed by the bursting of the film. If the film is only slightly bursted the bees can do but little injury. If the progress of decay has caused a wide rupture in the film, the bees more readily appropriate the juice."

"Mr. Richard Rees, a florist and horticulturist of many years experience in the Eastern and Western States, informs me that he has very carefully observed the effect of bees upon flowers and fruits in the orchard, garden and greenhouse. He regards their presence as wholly desirable and altogether beneficial. During a term of four years he had charge of a large conservatory and garden in this city. At times he had as many as fourteen different varieties of exotic grapes in bearing in the conservatory, and from two to three tons of ripe grapes hanging on the vines at once. A large apiary was located near by, and late in the fall and early in the spring the flowers and fruits in the conservatory were visited by the bees in great numbers. The grapes were unmolested, and the bees aided in fertilizing the flowers.

"He says that he has had large experience in grape growing in vineyards, and that he has never known any damage or loss from bees, and that when grapes are burst from over-ripeness, or decayed and blighted by the hatching of insect larvæ, to such an extent that bees can appropriate the juices, they are of little, if any value. He has never kept any bees, but he regards them as being of great service to floriculturists and horticulturists on account of the service rendered in fertilizing blossoms."—*Prof. McLain's Report, page* 339.

(*Concluded next week.*)

STATISTICS.

The Kind Which are Incorrect and Misleading.

Written for the American Bee Journal
BY H. G. BURNET.

The following is from the "Report of the Statistician," in the report of the Secretary of Agriculture for 1889, page 251. I would like to call attention to the last paragraph. Will not this be taken as a confirmation of the Wiley lie, which is the basis of so many newspaper articles derogatory to our pursuit? Please ventilate the matter.

Alva, Fla.

Here is the Statistical Report which Mr. Burnet refers to:

BEE-KEEPING.—Among the minor branches of rural industry bee-keeping is one of the most important, though its prominence is not generally recognized, from the fact that it is almost everywhere carried on as an incident of general agriculture, and but rarely as a leading rural occupation.

Every State and Territory reports bees, and more or less honey, usually a hive or a few colonies for each farmer rather than extensive apiaries and large production.

In some localities, as in portions of New York, Ohio, Tennessee, and California, where existing conditions are particularly favorable, apiculture is more prominent, dominating other industries perhaps in a neighborhood, though very rarely the leading branch of agriculture over any considerable area.

The value of the annual product of honey and wax is not generally realized; they are produced more or less extensively in every section of the country, and the aggregate value is large, much larger than that of other crops of which more notice is usually taken. It almost equals the total value of the rice or the hop crop, falls but little short of the buckwheat product, exceeds the value of our cane molasses, and of both maple syrup and sugar. It largely exceeds the aggregate value of all our vegetable fibers excepting cotton, and 1879 was half as large as the wine product of the year.

The latest official record of production by States is the return of the national census for the year 1879. It made the honey production 25.743.208 pounds, and wax 1,105.689 pounds. After careful study of all available data of local values and market prices, the average farm value of the honey was estimated at 22 cents per pound, and the wax at 33 cents, making the aggregate value of apiarian products at the place of production, $6.028.383. The product of the principal States in that year was as follows :

STATES.	HONEY. Lbs.	WAX. Lbs.
Tennessee	2,130,689	86,421
New York	2,088,845	79,756
Ohio	1,626,847	56,333
North Carolina	1,591,590	126,286
Kentucky	1,500,565	46,912
Pennsylvania	1,415,093	46,610
Illinois	1,310,806	45,640
Iowa	1,310,138	39,565
Virginia	1,090,451	53,200
All other	11,678,184	524,984
Total	25,743,208	1,105,689

Under the head of "all other," in the above statement, there is grouped the production of 36 States and Territories, ranging from 1,056,034 pounds of honey in Georgia to 50 pounds in Idaho.

The census of 1870 was defective in its returns of product for many crops, and its record of honey and wax in 1869 is undoubtedly much too low. It made the honey product only 14,702,815 pounds, too low in the aggregate, though the falling off in all States indicates that it was a year of short production. Illinois was the leading State, with a crop of 1,500,000 pounds, while North Carolina stood second.

The returns in 1860 were more satisfactory, and they show that the product of 1859 was but slightly exceeded by the crop of 1879, after 20 years of growth. The production of wax was actually greater. Many States show a product greater than that of 1879, and the aggregates of 23,366,357 pounds of honey and 1,322,787 pounds of wax indicate that there has been a comparative decline of the industry, the increase of population being taken into consideration.

The nine States given in the preceding table as those of principal production in 1879, produced 14,000,000 pounds; the same States 20 years earlier had a record of 13,900,000 pounds. With our rapid annual increase of population, to stand still in aggregate production is to retrograde. A more striking way of showing the decline in the industry is by a study of the comparative supply of the product at widely separated periods.

Our foreign trade in honey has never been large, and the balance has fluctuated. During five years past our average annual exportation has been valued at only $82,489, and importation at $52,891, making the value of the net exportation only $29,598. This little exportation goes principally to the United Kingdom, France and Germany, while our foreign purchases come mainly from the West Indies and Mexico. The balance of trade is too small to effect the supply, and our domestic consumption is satisfied with our home production.

In 1859 our production was 23.366,357 pounds, and our net importation not far from 3 000,000 pounds, making the supply available for consumption that year approximate 26,000,000 pounds. On the basis of the population June 30, 1860, this was a *per capita* supply of eight-tenths of a pound.

Twenty years later, when tremendous advances had been made in almost every branch of industry, the production of honey only amounted to 25.743.208 pounds, and the official records actually show a net exportation of honey, or something shipped as honey, amounting to about 570,000 pounds, making the net supply available about 25,000,000 pounds, or a million pounds less than at the first period. The supply per head was less than five-tenths of a pound. During the same period the *per capita* consumption of sugar and other sweets increased. Wealth and the ability to gratify taste for luxuries are greater, and yet the data seem to show a reduced consumption of this luxurious sweet.

So anomalous does this appear that some explanation must be found. If the supply per individual unit had been the same in the last period as the first, it would have required a product of 40,000,000 pounds. What has taken the place of honey in domestic consumption? Does the enormous increase in the manufacture of glucose and other saccharine adulterants indicate that a fraudulent article makes up the remainder of the needed supply? Did our people in 1879 consume 15,000,000 pounds of substitutes in the belief that they had the genuine product of the hive? Such would be a reasonable explanation of the comparative decline in bee-keeping.

[The Statistical Table referred to from the Census Report of 1880, is manifestly incorrect. One simple item will show its error so palpably that no further words will be necessary. California's honey crop is the largest of any State, and yet in the Census Table it is credited with only about one-half as much as Arkansas, one of the States producing but comparatively a small amount of honey !

It also gives North Carolina credit for 50 per cent. more than Michigan, and more than Illinois or Iowa ! Such "statistics" are very misleading, to say the least.

Our estimate, based upon statistics gathered by us some years ago, is that there are 300,000 bee-keepers in the United States and Canada, and the average annual product is one hundred millions of pounds of honey. Our Tabulated Statement by States may be found on page 320, of the BEE JOURNAL for 1881.

It is a notorious fact that the statistics given in the Census of 1880 are utterly unreliable ! This was admitted by Col. C. D. Wright, Chief of the Bureau of Labor Statistics at Washington, who was one of the principal persons who directed the formulating of the Census of that year.

In an address delivered before the Social Science Association at Saratoga, N. Y., in 1887, Col. Wright reviewed the whole Census matter, and pointed out its shortcomings, and then said :

> These two questions—capital invested and average wages—as answered by the Census, illustrate the fallacy of attempting to solve a certain line of economic questions through the Census as it has existed. In making this criticism, let it be understood that I arraign myself as severely as any one else ; for within a few years I have followed, in all the Census work in which I have been engaged, the old form ; nor did I fully comprehend the enormity of the error, and the infinite harm it has done, and is likely to do.

With this admission by Col. Wright, of the unreliability of the Census Report, we are surprised that the Statistician, Mr. J. R. Dodge, should attempt to make it prove that the industry of apiculture was declining.

Upon one erroneous conclusion he bases another argument, viz: that because of the decreased honey-production, the people have been annually "consuming fifteen millions of pounds of substitutes, in the belief that they had the genuine product of the hive."

By intimation, the Statistician endorses the Wiley lie about manufactured comb honey, years after it has been exploded and acknowledged to be a falsehood, by its author!

No, sir; your conclusions are as erroneous as your premises! The production of honey, instead of being only twenty-five millions of pounds—is over one hundred millions—four times as much! Its increase has kept pace with other products! And it is the "pure product of the hive," too!

It is too bad that such incorrect and damaging statements and arguments should be published by those who ought to know better; and going out under the endorsement of the Government, they not only deceive those not posted, but also form the basis for other falsehoods.—Ed.]

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Oct. 18.—York & Cumberland, at Goodman's Mills, Me
C. W. Costellow, Sec., Waterboro, Maine.

Oct. 22, 23.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Heavy Fall Crop—Foul Brood.

I have had no trouble whatever with my friends down in the swamps, though I heard a good many threats. I tried to compromise with them, but they would not listen to me, so I have just let them alone, and everything is quiet since the bees water in other places. I moved 96 hives there, and I believe that my crop of Spanish-needle, golden-rod, heart's-ease and asters from those 96 colonies will be over 5,000 pounds of extracted honey; even on the hills the fall crop is heavy. I think that my fall crop will amount to from 7,000 to 10,000 pounds, and I obtained about 5,000 pounds of surplus clover honey.

Now, as to foul brood: I do not believe that my bees ever had the foul brood, or Mr. Hambaugh's either; though a year ago I was so sure of it that I burned up three hives, combs, bees, and all. I am not certain, but I think the fault lies in the queen. I noticed the same condition of things in three or four hives this spring—some of them I just let alone, only kept the entrance controlled, and was very careful about handling them to prevent spreading it. It answered the description of foul brood to the dot, except there was no stench about it, and from two or three to a dozen of dead brood to a comb. It has disappeared altogether. This may explain how it was that some people have succeeded in curing foul brood with phenol or carbolic acid, or salicylic acid, etc. I do not suppose that their bees had the genuine foul brood, for I am satisfied that I never have seen the genuine foul brood. I have about 230 of as fine colonies as can be found anywhere—healthy, full of bees, brood and honey; I have never felt more encouraged to stick to the bee-business than this fall. The bees have worked heavy on golden-rod for nearly a month, and are at it yet very strong.

A. N. Draper.

Upper Alton, Ills., Sept. 25, 1890.

Fall Honey from Golden-Rod.

Bees are just rolling in the honey from golden-rod—the hives are just chock-full. I have had Carniolan bees for three years, and find the Italian bees the best of all.

John W. Rider.

Roseville, O., Oct. 6, 1890.

Large Fall Crop of Honey.

We have had the finest honey seeson this fall (from Sept. 15 to Oct. 1) that I ever saw—principally from golden-rod. Bees are strong in numbers, and rich in stores. They are surely in as good condition as bees could be for winter. J. A. Weeks.

Young's Creek, Ind., Oct. 6, 1890.

Sneeze-Weed and Aster.

I send two plants of which I would like you to please give the name. No. 1 grows in great abundance here in the Mississippi bottoms, begins blooming about the first week in August, and bees work on it all through the day; its honey is yellow and slightly bitter. No. 2 began blooming about Sept. 10, and bees work on it constantly; it yields a thick, yellow honey of fine flavor, and grows also in the bottoms, but not so plentiful as No. 1.

W. J. Cullinan.

Quincy, Ills., Sept. 17, 1890.

[No. 1 is sneeze-weed (*Helenium autumnale*). It has a large yellow blossom.

No. 2 is *Aster diffusus*, and has a small, white blossom.—C. M. Weed.]

When and How to Plant Melissa.

In reply to the question asked by Mr. W. M. Crutcher, of Zellwood, Fla., on page 644, as to the time and manner of planting melissa, I submit the following:

I sow the seed late in the fall, just before the ground freezes, or as early in the spring as the soil is fit to work. To obtain the best results, however, the plants should be cultivated, but I usually scatter the seeds in waste-places, and also on leased ground. In this locality I have found it profitable, as I have honey-producing plants in the interim between clover and fall flowers. By sowing at intervals, I have plants in bloom from July 10 until they are killed by frost. A. C. Tyrrel.

Madison, Nebr., Oct. 3, 1890.

The Davenport, Iowa, Fair.

It has been eleven years since I was in the bee-business, but there is yet an old love for honey, if not for the honey-bee. In attending the Davenport Fair, my attention was arrested by a large and beautiful display of honey and bees, by D. D. Hammond, of Malone, Iowa, and Wm. Kimble, of De Witt, Iowa. There was 3,000 pounds of extracted and comb honey. The extracted was in glass pails, and the comb was in one-pound sections. At the top of all was "FAIR, 1889," built of comb honey. The bees were in one-comb hives, with glass on either side. There were black, German, Cyprian, Syrian, Carniolan, hybrid and Minorcan bees, making a fine display. Dr. Palmer.

Davenport, Iowa.

Bee-Keeping on the Gulf.

I would like to inquire of any bee-keeper in Southwest Texas (in the vicinity of Corpus Cristi or Rockport, on the Gulf), whether it is a good location for successful honey-production. I desire the information, as I think of locating near Corpus Cristi, and it will depend very much whether the country will be suitable for honey production. C. M. Davis.

318 Rusk St., Denison, Texas.

[If any of our Texas readers can and will answer this question, they will do Mr. Davis a favor.—Ed.]

Worth Twenty Dollars a Year.

This has been the poorest season for honey since I have kept bees. I had 8 colonies of bees, spring count, in box-hives, lost 3 swarms, and have 10 colonies, fall count. I obtained 40 pounds of honey from the colonies in box-hives, and 300 pounds in one-pound sections from 5 colonies. If I had not subscribed for the American Bee Journal I should not have changed hives. I have taken the Bee Journal for one year, and it has been worth $20 to me since I subscribed for it.

Waupun, Wis. Forrest W. Streeter.

Bees Ready for Winter.

A few frosty nights have practically closed up the honey-gathering in this locality. Bees are in much better condition for wintering now than at this time last year. Since the middle of August, bees have obtained a large amount of honey, and the hives are chock-full of both bees and winter stores. A good winter for the wintering of bees is looked for. My entire apiary is in chaff hives, and will be left on the summer stands. I have at this date all the boxes and extracting frames removed from the hives, ready for the top-packing, just as soon as the leaves fall, and the weather gets cooler. A report as to the amount of honey obtained may be of some interest in the near future, notwithstanding I have only obtained a partial crop of honey. J. M. Young.

Plattsmouth, Nebr., Oct. 3, 1890.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

DENVER, Sept. 15.—We quote: 1-lbs., first grade, 16@18c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Oct. 9.—Market is strong at 17@18 cts. for white 1-lbs.; white 2-lbs., 16@17 cents. Extracted, 7½@8c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.: good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water st.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Oct. 8.—We quote: White 1-lbs., 16@18c.; dark, 12@14c. Receipts are light. We have received several carloads from California, of comb and extracted—1-lbs. we quote at the same price as native. We quote white 2-lbs. at 15@16c.; Extra C. and C. at 14@15c. Extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 11.—Demand for comb honey is larger than the receipts. We quote: White 1-lbs., 16c.; 2-lbs., 14c. Dark 1-lbs. 13c.; 2-lbs., 12c. Extracted, white, 7c.; dark, 5@6c. No beeswax on the market.
HAMBLIN & BEARSS, 514 Walnut St.

CINCINNATI, Oct. 8.—Demand is good for all kinds of honey. The supply is fair. We quote: Choice comb, 14@16c.; extracted, 5½@8c.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.
50E26t 1m1y.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

A B C of Strawberry Culture is the name of a neat pamphlet of 150 pages, by Messrs. T. B. Terry and A. I. Root. It covers the whole subject in an interesting manner, is nicely illustrated, and is just the work for those beginning to grow delicious strawberries. Price, postpaid, 40 cents. For sale at this office.

Send 25c For my Book of Discovery and Invention,
The Queen Restrictor
Address,
C. W. DAYTON, - Clinton, Wis.
42A1t

For Sale! 25,000 pounds of the very **Finest COMB HONEY,** in scant 1-lb. Sections, put up in white Basswood Cases holding 12 Sections—glass on one side of the Cases, showing off the honey nicely. A very fancy lot. The price is **20 cents per pound** on board the cars here. Who wants the lot?

L. W. BALDWIN & SON,
40Atf INDEPENDENCE, MO.

GROUND CORK
FOR
Packing Bees for Winter.

THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.

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246 East Madison Street, - CHICAGO, ILL.

The Lever.

THE NATIONAL - - - - - -
- - PROHIBITION NEWSPAPER.

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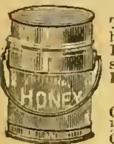
BEES AND HONEY

The Dovetailed **Strongest, Best and Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

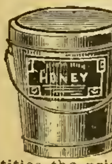
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

BEESWAX WANTED.

Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOS. G. NEWMAN & SON,
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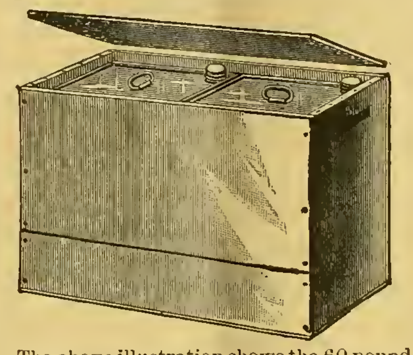
HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

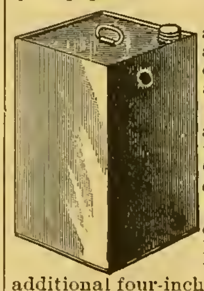
CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

Mention the American Bee Journal.

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can	(boxed)	$ .45
12 " Cans	"	5.00
100 " "	"	40.00
1 box of two Cans		.75
12 boxes "		8.40
100 " "		65.00

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

New Factory!

WE WILL soon be in our new Factory—which will be the largest and most complete in the world. We shall make the best of goods at lowest prices. We are ready for contracts for next season's Supplies. Write us.

G. B. LEWIS & CO., Watertown, Wis.
35Atf

Mention the American Bee Journal.

AGENTS WANTED

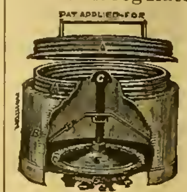
in every Town and County in America, to solicit subscriptions for the **ILLUSTRATED HOME JOURNAL.** Will allow a Cash Commission on all Subscriptions obtained. This is a fine opportunity for active young people to easily earn several dollars a day. Particulars as to commission, etc., and sample copies of the paper, will be sent to any address.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL

Mention the American Bee Journal.

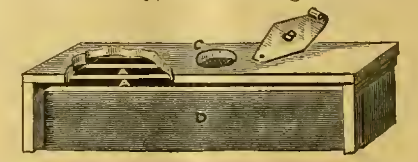
BEE-FEEDERS.

The Hasting's "Perfection" Bee-Feeder holds one quart, and the letting down of the food is regulated by a thumb-screw. The cover is put on securely. It is easy to regulate—either a quart or a spoonful can be given in a day or in an hour, as desired, and where it is needed most—over the cluster of bees. Not a drop of food need be lost, and robber bees cannot get at it.



Price, **40** cents, or one dozen for $3.50. Postage, 10 cts. extra on each Feeder. SPECIAL RATES to Dealers—Write for prices.

The "Shuck" Bee-Feeder, as here shown, may be placed at the hive-entrance, any time of the day, without danger from the robber bees. It feeds much or little, as may be wanted, and the food can be reached by the bees only from the inside of the hive.



Price, **30** cts., postpaid; by express, 25 cents each, or $2.40 per dozen.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILLS.

LOOK HERE!

BEFORE PLACING YOUR ORDER for SUPPLIES for 1891, get my Prices and Discounts.

Price-List FREE.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

WE have had splendid success this season. We believe we have filled all orders up to date, and can now send **Carniolan & Italian Queens** by return mail, providing you do not all order at once. We shall have about 100 of those **Beautiful Yellow Carniolan Queens** ready to ship during September—a new strain of bees possessing all the desirable points of Carniolans, with color added. Price of all Queens, **$1.00** each, by mail.

E. L. PRATT, PRATT BEE-FARM,
3Atf **Marlboro, Mass.**

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Muth's Honey-Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Oct. 25, 1890. No. 43.

EDITORIAL BUZZINGS.

"**In the World** is darkness,
So we must shine;
You in your little corner,
And I in mine."

◆

Will You go to the International next week, at Keokuk?

◆

If Feeding the bees is necessary, no time should be lost in supplying them with food for winter stores.

◆

Considerable Honey, in some localities, has been gathered during the past few weeks—and there, feeding will be unnecessary.

◆

E. L. Pratt has removed from Marlboro, Mass., to Beverly, Mass., an excellent location for bees only a few miles from Salem on the eastern division of the Boston & Lowell railroad.

◆

The Autumn Convocation of apiarists in Switzerland occurs at the same time as the Convention of the International at Keokuk, Iowa. It opens at the Hotel de France, in Lausanne, on Thursday, Oct. 30, at 10 a.m. We are reminded of the Convocation of the same society we attended eleven years ago, at the same place, and of the many excellent apiarists we there met for the first, and, perhaps, for the last time in our lives. M. de Ribeaucourt, the President, and M. Ed. Bertrand, the Secretary, we remember with more than ordinary pleasure, and we hope that the Convocation of the present autumn will be exceedingly pleasant and profitable.

Melissa, the honey-plant introduced to apiarists by A. C. Tyrrel, was exhibited at the Nebraska State Fair, and by a reporter was very much misrepresented—claiming that Prof. C. E. Bessey stated that it belonged to the sunflower family, and its name was "actinomeris squarossa." To this Mr. Tyrrel replied through the *World-Herald*, from which we copy the following:

> It is not true that the plant in question belongs to the sunflower family, neither is its title "actinomeris squarossa," nor is it the first, eighth, or sixteenth cousin of the sunflower. It belongs to the mint family, as will be shown by the following partial description of libiatæ mint family: Chiefly herbs with aromatic herbage, square stems; opposite simple leaves, more or less two-lipped corolla (whence the name of the order, at once distinguished from all the related family by the deeply four-parted ovary), as if four ovaries around the base of a common style, ripening into as many seedlike nutlets or akene, each containing a single seed. As in all these families, there are two lobes belonging to the upper, and three to the lower lip of the corolla.
>
> Flowers from the axils of the leaves or bracts, usually in cymose clusters, or running into terminal racemes or spikes. Stamens four, parallel and ascending, and projecting from a notch on the upper side of the corolla. Nutlets reticulated and pitted, obliquely fixed by the inner side near the base.
>
> My plant differs from actinomeris squarossa very materially; in spreading involucre, irregular rays, broadly winged akene, growing 4 to 10 feet high is a perennial, and flowers in September.
>
> The plant I call melissa in our rich bottom land and highly manured, never grows to exceed 2 feet and 10 inches in height, and usually blooms about July 10, and is an annual.
>
> I am "proud of my pet," for I was awarded a medal at the Paris Exposition on a gallon of melissa honey, the only one awarded on that class of honey in the world, which speaks volumes for the merits of the "weed" as a honey-producing plant. And I should think that all loyal Nebraska apiarists, and others interested in any growing industry, would be proud of the fact that any article of commerce produced in the State, and brought into the sharpest competition with the whole civilized world, should possess sufficient merit to entitle the exhibitor to receive the prize.

Of course, Prof. Bessey never made any such statement. Prof. T. J. Burrill, of Illinois, and Prof. Chas. R. Barnes, of Wisconsin, state emphatically: "The plant is Melissa officinalis." That settles it. But some reporters have very erroneous ideas, and persist in making all the trouble they can—anything for a sensational article.

Mr. Tyrrel writes us as follows about his honey crop: "If reports are true, I have taken more than three times as much honey, per colony, as any bee-keeper in Nebraska."

◆

Let All who can do so, make arrangements to go to Keokuk next week, and enjoy "the honey feast" with us. We expect to be on hand at the opening, and remain until the close, and shall be pleased to meet the reader there.

The Season in England.—Mr. W. T. Crawshaw, of Welwyn, England, writes us as follows:

> I see your report in the AMERICAN BEE JOURNAL, that the honey season in England is a failure. It has not been a failure with me, as I have had an average of 30 pounds per colony. I have taken 67 pounds from one in a Simmins' new hive (the non swarming hive). As far as I can learn, bees have done fairly well in this district; if the wet weather had not set in during the latter part of June and the beginning of July, this would have been a grand honey year. W. T. CRAWSHAW.

All we know about it, is that the *British Bee Journal* stated that the wet weather had greatly injured the honey crop, which is also confirmed by Mr. Crawshaw. We remarked that the opposite (a drouth) had made the honey crop a failure in America. We are glad to know that the honey crop in Herefordshire is not so bad—but that may not be a fair representation of the whole of England. We have localities in America where an excellent yield is reported—but on the whole, we have only about one-fourth of a crop.

◆

The Illinois State Fair was opened on Sept. 30, but it has been a long time since there was a good exhibit of bees and honey at a State Fair in Illinois. Some way or other the bee-keepers of this State do not believe in exhibits of honey, or else the premiums are too small to call out an exhibit that will be creditable. Mrs. L. Harrison, in the *Prairie Farmer*, gives her impressions of the honey exhibit this year, in these words:

> Of course bee and honey exhibits have superior attractions for me over anything else, and thither I wended my way. I found a few congenial spirits, and enjoyed a hearty hand-shaking all around. Illinois bee-keepers have very little to show, but Iowa has come to the rescue with a fine display. One exhibitor from that State could fill the whole space allotted to the industry by the State Fair Association. This exhibitor has white clover honey in sections, and extracted in cute little glass pails too expensive for the general market.
>
> One exhibitor of this locality has Mason jars of dark wine-colored honey gathered in June. He thinks that it was gathered from raspberry, and it is of fine flavor. It is humiliating, but Iowa, no doubt, will bear away the blue.
>
> Bees and queens are on exhibition, and attract considerable attention. Timid persons give them a wide berth, although they are securely caged.

◆

Fumes of Sulphur will again do their deadly work in many places this fall. A visitor at this office a few days ago, said he was going to kill 100 colonies; and in his neighborhood about 1,000 colonies will share the same fate. This has been decided upon, rather than to provide them with winter stores, as they had gathered none.

◆

Clubs of 5 New Subscriptions for $4.00. to any addresses. Ten for $7.50.

GLEAMS OF NEWS.

Indiana State Fair.—The Bee and Honey Exhibit at this Fair was the largest ever made in the State. The list of premiums awarded are furnished us by Julius Moesch, and are as follows :

Queen-bees—1st premium, Julius Moesch ; 2d, Walter S. Pouder.

Extracted honey—1st premium, R. S. Russell ; 2d, Julius Moesch.

Comb honey—1st, J. C. Zimmerman ; 2d, R. S. Russell.

Display of honey, the product of one apiary—1st, Geo. H. Kirkpatrick ; 2d, J. C. Zimmerman.

Display of wax—1st, Walter S. Pouder ; 2d, Aaron Hunt.

Display of Apiarian supplies—1st, Geo. H. Kirkpatrick ; 2d, J. C. Zimmerman.

Apparatus for the manufacture of comb foundation—1st, J. C. Zimmerman ; 2d, Geo. H. Kirkpatrick.

Comb foundation for brood-nest—1st, Julius Moesch ; 2d, Walter S. Pouder.

Comb foundation for surplus—1st, Walter S. Pouder ; 2d, Julius Moesch.

Honey-extractor—1st, Aaron Hunt ; 2d, J. C. Zimmerman.

Solar wax-extractor—1st, J. C. Zimmerman ; 2d, Aaron Hunt.

Honey-vinegar—1st, Julius Moesch ; 2d, J. C. Zimmerman.

Sections—1st, Julius Moesch ; 2d, Aaron Hunt.

Display of wholesale packages and crates for honey—1st, Geo. H. Kirkpatrick ; 2d, J. C. Zimmerman.

Display of retail packages for extracted honey—1st, Geo. H. Kirkpatrick ; 2d, Walter S. Pouder.

Collection of honey plants—2d, a lady from Greensburg ; 1st, Julius Moesch.

◆

Importation of Oriental Bees.—Prof. A. J. Cook writes as follows on this subject :

Every bee-keeper knows that the bee-industry has been materially advanced by the importation of foreign bees—like the Italians, Carniolans, etc. No bee-keeper knows but that there are other bees that are far superior to any we yet have. Surely, it is not creditable to the enterprise of our time that the Orient is not made to show its hand, and any superior bees that may be in existence in Africa, India, Ceylon, Philippine Islands brought here for our use and test.

Private enterprise should not be called to do this. We have few Joneses—few men that could do it. It seems to me that our Government should take the work in hand.

I have recently had an interview with the Government officials, and received no slight encouragement. The Government could do this with but a small outlay, and might confer a great benefit on our industry.

It has been suggested to me that the bee-keepers memorialize the Hon. J. M. Rusk, Secretary of Agriculture. Bee-keepers can get what they ask for, if united.

I wish bee-keepers would think it over. I have requested President Taylor to bring the matter up at Keokuk. The Central Michigan Society acted in the matter yesterday, and the State Society will consider it next January. A. J. Cook.

This is a good idea. We think that the International Society should take the initiative, and will reserve further remarks until then.

Spraying Fruit Trees.—A year ago Mr. C. A. Huff, of Clayton, Mich., wrote to us about the following paragraph which was in the price-list of the Green Nursery Co., Rochester, N. Y. :

Ten years ago but few plums were grown. Fruit-growers supposed that the curculio was unconquerable. But it appears that the curculio is as easily destroyed as any other insect, and now plum growing is a great success and very profitable. A spray of very weak Paris-green water thrown upon the foliage at blossoming time, also again a few weeks later, destroys the curculio.

We commented upon it thus on page 691 of the Bee Journal for Nov. 2, 1889 :

"Mr. C. A. Huff, of Clayton, Mich., wrote them that their advice would do great damage by poisoning bees if the sprinkling be done while the trees are in bloom. We would call their attention to the matter, and present to their notice this fact, that should the bees gather the poisoned honey, and it be eaten, much damage would result in a way that would be very unpleasant for them.

"Besides, the insect does not damage the blossom. The fruit is injured ; and spraythe blossoms is useless. The time to spray the trees is just after the blossoms fall—then it will kill the insect-pest, and do no damage to bees or honey.

"The Green Nursery Company have no doubt innocently fallen into error, and will cheerfully make the correction in the next edition of their Circular, now that their attention is called to the matter."

The fact that the Green Nursery Company have printed the same paragraph in their price-list for this Fall, shows that we estimated them too charitably. We certainly thought that they would gladly make the correction in future editions, when their attention had been called to the blunder. We now call upon them *again* to do so—and have written them privately for the second time, so that they may be sure to see it, even if they should not have noticed the paper sent them with the paragraph marked.

It is a very serious matter, and any honorable firm (such as we deemed the company to be) would find delight in changing off an erroneous statement for a truthful one—especially when that "statement" takes the form of giving ADVICE !

We hope that this notification will cause them to take the matter in hand *at once*, and that they will make all amends for their past blunder, and negligence !

LATER.—Since the above was "set up" in type, we have received the following from Mr. Chas. A. Green, in answer to our letter :

ROCHESTER, N. Y., Oct. 11, 1890.

DEAR SIR :—We made correction at the time in our *Fruit Grower*. The Catalogue for fall was printed from former electrotyped plates, hence the mistake, as we had forgotten about it, and did not read the electrotyped matter.

As far as our advice was good for fruit, it was correct. It simply was death to the bees, which question we did not consider at all, but gladly do so now, and thank you for your zeal. CHAS. A. GREEN,
Manager.

Yes, it is "death to the bees," and as they cannot speak for themselves, we speak for them. We hope Mr. Huff will find it all right in the spring catalogue of the "Green Nursery Company." If not, we will try again.

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Last Week we gave a list of the premiums at the Rhode Island Fair on bees and honey. The New England *Homestead* remarks thus about the excellent exhibit made by Prof. Cushman :

The apiary exhibit attracted immediate attention. It was undoubtedly the best ever shown in the East. This industry is as yet in its infancy in the State, but is fast coming to the front. To do all in its power to help, the State Experiment Station at Kingston has established an apiary department, under the charge of Prof. Samuel Cushman. This Station is one of a few, if not the only one, that makes a specialty of this work. Prof. Cushman had a valuable illustrative exhibit, which included 12 standard hives of different patterns, such as are used by bee-keepers in different parts of the country. Also about 100 pounds of extracted honey in tall, cylindrical glass jars with nickled and screw caps, to show how honey can be put up in the most attractive shape to sell. The label was especially worthy of examination and copying by bee-keepers, as it gives plain and simple directions to the buyer how to store honey in the best condition.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Song of Bird and Bee.

Written for the Backwood's Magazine

BY C. M. O'NEIL.

The night is come with all her silver train,
The moonlight steeps the sea ;
The hour is come that I can rest again,
And dream of thee.

The air is still, the western sky is gold,
And far on lawn and lea
The shadows bring the happy thought of old,
And dreams of thee.

The sweetest hour of summer day is ended ;
The song of bird and bee
To the still time their influence is lending,
And sing of thee.

QUERIES and REPLIES.

Losing Swarms when the Queens Have Clipped Wings.

Written for the American Bee Journal

QUERY 735.—Is there much danger of losing queens with clipped wings not watched closely, and permitted to swarm naturally ?—K.

Yes.—H. D. CUTTING.

Yes.—DADANT & SON.

Yes, sir.– JAMES HEDDON.

Most assuredly.—J. M. HAMBAUGH.

They need to be pretty closely watched. —M. MAHIN.

Yes, unless the hive is close to the ground. —G. M. DOOLITTLE.

I do not know. We do not practice "clipping."—MRS. L. HARRISON.

Not if the hives are properly placed—not less than 6 or 8 feet apart each way, and so that the queen can crawl back.—A. B. MASON.

Yes, if the bee-keeper is not on hand to attend to them.—G. L. TINKER.

It depends upon the location. If the ground about the apiary is infested with ants, there would be great danger.—J. P. H. BROWN.

I have lost a good many. If the hives were 10 feet apart, I think that very few would be lost.—C. C. MILLER.

There is some danger, especially if the hives are raised some distance from the ground.—C. H. DIBBERN.

Yes, considerable, unless a little care is exercised. It is easy to watch and prevent any such loss.—A. J. COOK.

The queen generally returns to her own hive if the entrance is accessible to her. Occasionally she would get into another hive, if within 4 or 5 feet.—R. L. TAYLOR.

At the time of swarming, queens with clipped wings must be watched, as not only they may get lost in the grass, or be killed by neighboring bees, but I have often had them killed by the bees of her hive, after 3 or 4 attempts at swarming.—P. L. VIALLON.

I think there is. Some think differently. The question is a "mooted" one with bee-keepers, and will never be decided positively, or to the satisfaction of everybody. —J. E. POND.

Perhaps there is some danger. It would depend upon, first, how near to the ground the hives were, and whether it would be easy for the queen to crawl back ; and second, proximity to other hives.—EUGENE SECOR.

They are not as often lost, as one would naturally suppose when relying on theory instead of actual practice. It is proper to know and understand, that if a colony of of bees, bent on swarming, is neglected when their queen is unable to follow them, they will supersede her, and rely on the brood of the young queen to give them a glorious tilt at swarming, or casting after-swarms. I wish to say here, that the plan of clipping the queen's wing is perfectly practicable, but the bees must have prompt attention.—G. W. DEMAREE.

There is danger, of course. But if the hive rests on the ground, the queen will get to her own hive, pretty generally, at the usual time of swarming. Watching will be necessary to prevent "queens with clipped wings" being superseded, when the bees find that their queen cannot follow them. At such times they often become disgusted and conclude to supersede the queen having clipped wings, if not watched and prevented.—THE EDITOR.

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Swarms in October.—Mr. Roscoe Laubach, of Indianola, Iowa, on Oct. 11, 1890, wrote as follows:

What does it mean when bees swarm in October ? My grandfather had one swarm to-day. They came out and flew around awhile, and finally lit on the limb of an apple tree, about 6 or 7 feet from the ground. They were hived, and then they came out again and lit on the same limb. What does this mean ? I am young, and I have one colony of bees. My grandfather has 12 colonies, and he is caring for 14 colonies for another man.

[The bees left the hive because they were dissatisfied with their surroundings. They were probably short of provisions, and swarmed out, prompted by self-preservation, hoping to find some place more promising for the future. If you give them a frame or two of honey, and if possible some brood, they will no doubt remain.—ED.]

Statistical. — An exchange contains the following figures on bees, bee-keepers and beeswax. Some of the items appear rather large, but they may be correct. It reads thus :

Careful estimates put the number of bee-keepers in the United States at 350,000 ; over 10,000 of this number keep more than 500 hives each. The value of the honey produced by them in 1889 was over $100,000,000, and the value of the beeswax produced for the same year exceeded $17,000,000. Many tons of wax were manufactured into comb foundation to be used by the bee-keepers in their own apiaries, as it is fully demonstrated that the use of foundation in the apiaries very largely increases the yield of honey. There is little doubt that in the very near future the bee-keeper will use all the wax he produces for comb foundation. One firm made 64,000 pounds of it last year, and found sale for it at home.

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Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The next meeting of the Turkey Hill Bee-Keepers' Association, will be held at the Turkey Hill Grange Hall, near Wilderman's Station, three miles southeast of Belleville, Ills., on Oct. 30, 1890. All interested in bee-keeping are cordially invited.
A. FEHR, Sec.

The International Convention will be held in the G. A. R. Hall, Estes House, Keokuk, Iowa, Oct. 29, 30 and 31, 1890.

PROGRAMME.

First Day—Wednesday, Oct. 29.

9:00 A.M.—Call to order. Reception of new Members. Payment of Dues. Appointment of Committees for Question-Box and other purposes.

10:00 A.M.—Address of Welcome—J. E. Craig, Mayor of Keokuk.

RECESS.

11:00 A.M.—"Fifty Years' Progress in Apiculture."—Thomas G. Newman, Editor of the American Bee Journal, Chicago.

QUESTION-BOX.

1:30 P.M.—"Apicultural Journalism."—W. Z. Hutchinson, Editor of the Bee-Keepers' Review, Flint, Mich.

DISCUSSION.

3:00 P.M.—President's Address.—Hon. R. L. Taylor, Lapeer, Mich.

3:30 P.M.—"Honey Pasturage of the United States."—A. I. Root, Editor of Gleanings in Bee-Culture, Medina, Ohio.

DISCUSSION.

QUESTION-BOX.

7:00 P.M.—"Apiarian Exhibit at the Coming Chicago International Fair."—Dr. A. B. Mason, Auburndale, Ohio.

DISCUSSION.

QUESTION-BOX.

Second Day—Thursday, Oct. 30.

8:30 A.M.—"What I don't know about Bee-Keeping."—Dr. C. C. Miller, Marengo, Ills.

DISCUSSION.

11:00 A.M.—Condensed Reports of the Affiliated Associations in regard to Crops and Prospects.

QUESTION-BOX.

1:30 P.M.—"Is it best to use full sheets of Foundation in Brood and Surplus Frames ?"—Eugene Secor, Forest City, Iowa.

DISCUSSION.

3:00 P.M.—"Fixed Frames versus Suspended Frames."—Ernest R. Root, Medina, Ohio.

DISCUSSION.

7:00 P.M.—"The conditions necessary to insure a Honey Crop."—Prof. A. J. Cook, Agricultural College, Mich.

DISCUSSION.

QUESTION-BOX.

Third Day—Friday, Oct. 31.

8:30 A.M.—Business of the Association. Secretary's and Treasurer's Reports. Election of Officers.

11:00 A.M.—"In an Apiary run for Honey only, are Italians or Hybrids preferable ?"—C. F. Muth, Cincinnati, Ohio.

1:30 P.M.—Volunteer contributions from different sources.

3:00 P.M.—"The International Bee-Association. Its past and future."—W. F. Clarke, Guelph, Ont., Canada.

The Question-Box Committee will receive questions at any time, and will appoint different members to answer those that are deemed of sufficient interest or importance.

As this is the first meeting of this International Bee-Association held West of the Mississippi, it is hoped that the Western bee-keepers will make an effort to show what the West can do. A number of ladies are expected, as usual. The essayists named in the programme will nearly all be present.

A special room on the same floor as the G. A. R. Hall, has been secured for exhibits of bees or their products, or implements, and a special committee will report as to their merits. Articles for exhibition, if prepaid to Keokuk and addressed to the Secretary, will be delivered in the proper place free of charge.

The Hotel Keokuk, one of the best hotels in the West, a $3.00 house, will take members at $2.00 per day. The McCarty Boarding, in the Estes House, on same floor as the G. A. R. Hall, will board members at $1.00 per day.

Parties wishing to attend will be freely furnished all necessary information. Reduced Railroad Rates are not to be had.

C. P. DADANT, Secretary,
Hamilton, Ills.

Autumn Thoughts.

Written for the Illustrated Home Journal
BY IDALIA TREGELLAS.

The dew-drops are glistening on flower and leaf,
The blue-jay and robin are talking together ;
The summer was lovely, but it seemed, ah, so brief,
And now we are watching the gay autumn weather

The hickory is dressed all in yellow and brown,
And the ripe nuts are falling from every bough ;
The rock-maple tree wears a golden crown,
The Frost kissed it last night—the Sun's kissing it now.

The leaves of the sassafras whisper and rustle,
As they sprinkle the green grass all over with red,
The Elm scolds the Wind so,because he will bustle,
That the gray squirrel peeps out to hear what is said.

The golden-rod fringes the roadside with yellow,
The asters are crimson and pink in the wood,
The "niggar-head" nods like a jolly old fellow—
The Wahoo and sumac are gleaming like blood.

The woodland brook murmurs "good-by" to the flowers,
As it glides over stones and around moss-grown trees ;
The brown-thrush has left us for pleasanter bowers,
And the chipmunk a lesson has learned from the bees.

Astoria, Ills.

CORRESPONDENCE.

WINTERING.

How to Properly Pack Bees for the Winter.

Written for the American Bee Journal

BY C. W. DAYTON.

The best substance for packing bees is ground cork ; next is forest leaves, and then comes oat-chaff.

One or the other of these substances should be placed over the clusters in a manner and in sufficient quantity to admit of a slow draft upward through it. The draft should be slow—not enough to waste the heat from the bees. Where there is not a draft upward, the cold penetrates from above, and meets the warmth from the bees ; and at the point of meeting the condensation of moisture takes place. Following this condensation of moisture, comes the accumulation of moisture.

If the packing over the bees is 6 inches thick, and the condensation of moisture takes place 3 inches above the lower edge of the packing, the packing at that point becomes wet, and forms an impervious roof to the brood-nest, and ends all upward ventilation when the condensation and accumulation of moisture will extend toward the bees until it will be found adhering to the inner wall of the brood-chamber—in small particles at first, and large drops later on, until the drops become of sufficient size to trickle down upon the combs, souring the honey in open cells, or invading the cluster of the bees.

I have watched many colonies wintering in hives that were provided with impervious coverings to the brood-nests, to prevent upward circulation, where it required two months for the moisture to become visible to the eye, and two months more to produce ordinary-sized drops of water, which finally loosened their hold on the ceiling, and dropped directly into the cluster. This caused a disturbance; the disturbance produced more warmth, and the increase of warmth brought more condensation of moisture. Such condensed moisture is largely a question of time, whether the colonies are situated in a cellar or out-of-doors.

Bees possess a marked instinct of cleanliness. When this moisture drops into the cluster of bees, in the neighborhood where the earliest brood is likely to be reared, it is taken up by the bees with the expectancy of carrying it from the hive. As such opportunities seldom occur during our Northern winters, the water is retained in the stomach of the bees, and in time causes indigestion and consequent overloaded intestines. This is the nature of nine-tenths of the cases of bee-diarrhea.

I have experimented along this line in a somewhat artificial manner—by allowing a colony, having a comb of brood to protect, to remain in an uncovered hive during two days of rainy weather, when the colony showed unmistakable symptoms of diarrhea. At the same time other colonies were given strange combs containing no brood, and the bees remained healthy. If the disease was not caused by the bees taking up and holding the water that ran on the brood, then what did cause the disease ?

There is no general rule to be given as to the proper amount of absorbent or packing to use. This must be determined by the kee-keeper who must learn from his own experience to properly apply the idea.

Some apply this method of ventilation to prevent the condensation of moisture within the brood-chamber, by raising the edge of the honey-board so as to leave a narrow crack at one side. All the plans tend toward the slow or slight upward draft that carries the moisture onward, and finally out of the hive, and exceptional colonies here and there that winter without such draft may be said to have escaped by mere chance. Eight inches of forest leaves slightly pressed is usually about right. Four inches in depth of chaff, lightly thrown in, is right ; but if it be pressed down, it may prevent the circulation through it.

Clinton, Wis.

CRITICISMS

On Various Apiarian Questions of the Day.

Written for the American Bee Journal

BY G. W. DEMAREE.

Very many things are published in our bee-periodicals which ought not to pass without honest and fair criticism. But few of us, however, fancy a task of that kind, because too many writers do not take kindly to even the fairest and most friendly criticisms. But it should be borne in mind that the bee-keeping ranks are continually being filled up by beginners, as the business increases and the older ones retire or pass away. These beginners are entitled to protection. I hope that these remarks will exempt me from being charged with being a mere chronic "fault finder." Most persons who criticize the words and deeds of their fellows, are generally regarded in that light ; but is it necessarily so ? Are we willing to admit that honest criticism is out of place—a thing not possible among men ?

THE TEASEL.

On page 660, we find a good illustration of the teasel, but the "facts" there given are not altogether the whole truth. In my locality, the wild teasel is often so perfect in its growth and maturity as to stick to the hands like steel hooks.

QUEENLESS BEES AND DRONE-COMB.

Owing to several months of sickness on my part, the answers to queries for some weeks have not materialized, and for this reason I wish to say that the substance of Query No. 732 shows on its face that the querist is a novice in the science of bees, and ought not to be severely chided. It is so often told that queenless bees will build store or drone-comb, that the error he falls into is not surprising, seeing that so many practical honey-producers who answer his query have not tried the experiment, and have to guess at an answer.

Queenless bees, when left to their own instincts, *nearly always* build store or drone-comb ; but when supplied with good worker foundation they draw it out just like bees do that have a good laying queen. I have often had the opportunity to see this done when practicing my "queenless system" of obtaining surplus honey.

COLORS OF BEES.

On page 662, we have a lesson on this subject. It is not a thing new to me—I have gone over these grounds quite a number of times in the past 15 years. "Very yellow bees" is generally the result of a mixture of blood with Cyprian and Syrian races, and the water-colored capping of comb honey is the result of filling the cells too full; that is, it is exaggerated economy in the bees that finish their capping in that way. You can verify the truth of this if you will, by placing a nice, white section of honey in the extractor basket, and turning it rapidly for a few minutes. The centrifugal force will drive or start the honey from its position in the cells, and press it close against the white capping, and will change the white to the water-color.

Speaking of color characteristics in bees, after all the experiments in "dark and mixed stripes," you will find the same thing in some of the freshly-imported queens of the Italian race. Many good bee-men will bear me out in this statement.

GOLDEN-ROD AS A HONEY-PLANT.

On page 663 are some things on this subject which need investigation. The several varieties of the golden-rods should be collected by some one or more of the authors of our best works on bee-culture, and classified and illustrated for future editions of their works. As a *fall* honey-plant, I have never seen but the one variety of the golden-rod. Certainly more information in regard to the several varieties of this plant is needed to establish it as a *valuable* honey-plant.

SURE METHOD OF INTRODUCING QUEENS.

On page 665, we have something "sure" on this important manipulation. Now the truth is, the same results can be obtained by placing the cage containing the queen to be introduced *immediately* with the bees with which she is to be introduced—I mean at the same time the queen is removed.

The safe way is to *watch the behavior of the bees toward the queen* in the introducing-cage. When the bees are found crawling quietly over the cage when it is first uncovered and brought to view, there is no danger in removing the stopper to the food department, and leaving the bees to liberate the queen by eating out the food. In my opinion, no tin should ever be used as a part of a queen-cage. Tin is cold, "slick," and condenses moisture. Wood is the best material, always. I do not mean to say that the writer on page 665 uses tin about his cages—he only speaks of the "thin lid" which does not necessarily mean tin.

FEEDING BACK HONEY.

On page 666 is an interesting article on this subject. I wish to say that in my experiments I have found that all queen "restrictors" or queen-excluders are unnecessary trapping when feeding back—in fact, they are positively useless, if not a positive hindrance. The best condition is a standard brood-chamber filled with brood and sealed honey. It is a well-known fact that bees *breed but little* when there is an overflowing in of honey. If the feeding back is rightly done, the bees will bend every energy to the work of storing the flow of honey, and let breeding go by default.

SYRIAN BEES.

On pages 666 and 667, inclusive, we have the reiteration of the often repeated mistake that a good, strong condition of a colony of bees is "no good" except when the fields are yielding nectar in surplus quantity. Is this true? Hold up your hands, ye old bee-men. Of course there are some "mental reservations" here, but they are hidden from the beginner. The bee-hive contains a "family," not a set of hired servants. Hence the illustrations given are fallacious, and misleading. I formerly entertained some such views, but time and experience have taught me that the "family" must have numbers as a *foundation* for future usefulness. Everything may be overdone, but they are most frequently underdone. I am no advocate of Syrian bees, neither am I an advocate of "contraction."

Christiansburg, Ky.

THE SEASON.

Results of the Past, and Prospects for the Future.

Written for the Michigan Farmer
BY GEO. E. HILTON.

I think the bee-keepers of Michigan have rarely started out with more enthusiasm, higher hopes, or better prospects—so far as could be prophesied—than last spring. It is true the weather was a little backward, but bees in warm hives with plenty of stores built up rapidly, and when the fruit bloom came they were ready for it, but alas, where was the nectar? and echo answers, where?

That, with the delicious fragrance that is usually in company at this time, failed to materialize, and empty bee-hives then, and fruitless fruit trees now, are the result. From the time of fruit-bloom until about the 15th of June, all vegetation seemed to stand still, the weather was cool, and bees with hives full of young bees and brood consumed their stores and brood-rearing ceased; while those in a poorer condition dwindled or died outright, so that when white clover, blackberries, raspberries, etc., all came on with a rush, the bees were in no condition to store a surplus.

Usually the first ten days of clover bloom produce but little honey; this year it yielded in abundance as a few exceptional colonies demonstrated. Then came a succession of dry hot winds, never experienced in Michigan before, and the white yield ended.

Our only hope for light colored honey then was in the basswood; the trees were full of buds, and promised wonderfully; they opened from July 15 to 20, the hot winds continued, and the beautiful cream colored blossoms were turned brown in a single day—the trees were odorless as the result of the nectar failing to materialize.

What next? Well, there was a large acreage of buckwheat sown, and the fall bloom of asters, golden-rod, etc., promised well; surely this condition so adverse to the secretion of nectar will pass over, and we shall have one of those phenomenal fall yields; in the absence of white honey, dark will bring a good price, and our bees will go into winter quarters in good condition for the hard winter we should always prepare for. But the same conditions continue, and our last hope is crushed; the most of us find ourselves without honey to spread upon our own bread, to say nothing of honey to spread the bread of others.

What is the result? Why, simply honey is going to be appreciated as never before, that for the next few years it is going to bring good if not fabulous prices, as will also bees in the spring. Thousands of colonies will be destroyed this fall, and thousands more will, for lack of attention, die before "the roses bloom again," and to the bee-keeper who wears "eternal vigilance" upon his brow, this means money.

If you have not done so, the first thing you do after reading this article, go and look your bees over carefully, and see that every colony has a queen and 25 or 30 pounds of honey. If you find some short, and you cannot possibly afford to buy stores for them, select 2 colonies that have not the requisite amount, and unite them by removing half of the combs from the colony containing the best queen, leaving those containing the most honey; spread them so that half of the best combs from the other colony may be alternated with the first, being careful to destroy the inferior queen.

If your hives are not so arranged that the bees can run in from the ground, so arrange them, and then shake the remaining bees from the poorer combs all down together; they will run in, and there will be but little if any quarreling.

Fremont, Mich.

BEE-CULTURE.

Advantages to be Found in the Keeping of Bees.

Read at the Texas Farmers' Institute

BY MRS. SALLIE E. SHERMAN.

Did you ever think of it, why so many farmers all over our country, even here in our grand State of Texas, make so many failures, and fail to profit by past experience? They go plodding along with their heads down year after year, farming "just as father did" before them, without taking and reading good agricultural papers, or even reasoning and thinking for themselves, and profiting by past experience. This is an age of progress. We must be up and at work—not altogether with brawn and muscle, but with brain as well.

Too many think that they must number their acres in cultivation by the hundred, and plant cotton almost to the exclusion of everything else, instead of having fewer acres well diversified, and thoroughly cultivated, putting only the surplus in cotton.

Every farmer should have his nice orchard, garden, and poultry yard, with a few first-class cows, instead of so much scrub-stock, and perhaps last, but I will not say least, a few good colonies of bees to supply his table bountifully all the year with that purest and best of sweets with which God in His infinite wisdom has blessed His creatures on earth. He has spread out the carpet of beautiful flowers for us to feast our eyes upon—yea, He has done more, He has given us the wonderful honey-bee to gather the nectar from those beautiful flowers, and store it away in marvelously constructed cells of wax—not only enough for their own use, but a generous supply for the use of man, if properly and intelligently cared for.

But the bee and its product, in the eyes of a great many, are too small a thing to attract their attention; yet, from one colony and its increase, with the introduction of Italian queens, I have in the last ten years sold many thousands of pounds of honey, and never have been without it during all that time, after getting the first lot from the first hive.

I use honey for preserving, making jelly, jam, cake, etc.; in fact, I only have to buy sugar for coffee.

Now suppose all the honey that is secreted by the flowers in Texas was saved and used by our people, do you not think that there would be many a glad little heart, and many rosy little cheeks that are now sallow and languid? I now say without fear of successful contradiction, that pure honey is the most healthful sweet known to man, then why let it go to waste? Why sit around mourning and complaining of hard times? Get up and look around; save that which is going to waste; for I assure you that you will have plenty, and no more need of complaining. Put your wits to work, study and plan, and then work to those plans. Never say, "I can't," but instead say, "I'll try," and then keep trying—never give up!

I'll tell you that there is often more in the person, than in his surroundings. A small home, well cared for, is much more desirable than a large one botched over, and perhaps not all paid for.

We should always aim to live within our income. A person with plenty of "get up and git," and stick-to-ativeness, with a few colonies of bees can, in a few years time, earn a good living upon a very small plot of ground, especially if he will combine poultry-raising (or something of that kind) with bee-keeping.

A gentleman with whom I have dealt largely since I have been making a specialty of bee-keeping, had one colony of Italian bees in the city of New York, merely for experimental purposes at first. They, however, soon increased to quite a number. He then put them on top of a four story house in the busy city, and kept them there until they had increased to 100 colonies. He then put them on board a vessel, and sent them to Cuba.

Your own beautiful Williamson has the proud record of being the banner honey-producing county in our great State, and in 1888 brought in the snug sum of $10,437, which is a considerable item in the people's purses; especially when we take into consideration the small (and to a great many insignificant) insect that gathered the 128,053 pounds of honey that would without their aid have been lost, and no one been benefited thereby. Then, I say, despise not small things, but rather learn from them the beautiful lessons of industry and economy.

In 1888, at my quiet little home in Salado, Bell county, my own 40 colonies gave me, over and above an abundant support for themselves, 6,000 pounds of honey, 100 pounds of wax, and 20 colonies increase—making an average of 150 pounds for each colony. Every pound of the honey I handled myself.

There are persons living here who used to know me in my dyspeptic days; they say that I "used to look like a bean-pole, but now more like a mountain." My good health is due to active out-door exercise, where I get plenty of pure fresh air while working with and amongst my bees, and to the almost constant use of honey.

There is no doubt about honey being one of the most healthful articles of diet that we can use. A friend of mine, a resident of this county, says that when his family have plenty of honey to eat, they are always healthy, and never have any doctor's bills to pay. When their honey gives out, they get sick right away. He seems to think that honey is a panacea for all the ills to which his family are subject. He carries a bottle of extracted honey in his pocket, and drinks it occasionally all through the ginning season, thus clearing his throat and lungs of all dust and lint with which they become clogged. It may be well for others to make a note of this, and be governed accordingly.

Bees are not only valuable for the honey and wax that they gather and produce, but are also one of the farmers' and horticulturists' very best friends, in distributing pollen from flower to flower, causing more perfect fertilization and better fruit as a result of their work in this line.

It is to be hoped, now that our governor has been made president of the A. and M. College, that he will at once take steps to see that apiculture (bee-culture) is not entirely ignored at the College; but that it shall have the fostering care and attention that its importance demands, which I contend is almost, if not quite, co-equal with agriculture and horticulture.

Salado, Texas.

BEES AND FRUIT.

The Fertilization of Plants by Bees.

Report of U.S. Department of Agriculture

BY SAMUEL CUSHMAN.

"APIPHOBIA.—The people of Wenham have voted that no bees shall be kept in town———the vote being directed against an extensive bee-keeper whose stock has been troublesome. Some say the action of the town is of doubtful constitutionality."—*Boston Journal*, 1868.

"The good people of Wenham have judged that bee-keeping and fruit-raising are incompatible, and that bees are a nuisance!! We also notice that the bee-keeper 'whose stock has been troublesome,' advertises in the Salem *Gazette*, 'his farm for sale, consisting of three-quarters of an acre of tillage land containing from 75 to 100 pear trees, beside apple trees. The pear trees, in 1867, bore 30 bushels of choice standard fruit.'

"Have we gone back to the days of belief in witches and witchcraft?

"This disease, apiphobia as many call it, has affected mankind before. Among some of its attending symptoms are intense bigotry (sometimes leading to much persecution) and an unreasoning credulity, so that all sorts of horrible stories regarding these entomological monsters are eagerly believed. A little knowledge of Natural History is really the only antidote yet discovered against this fell disease."—*Prof. A. S. Packard, Entomologist* (*now of Brown University*) *in American Naturalist, 1869.*

"ARE BEES INJURIOUS TO FRUIT ?"

"All the evidence given by botanists and zoologists who have specially studied the subject, shows that bees improve the quality and tend to increase the quantity of fruit. They aid the fertilization of flowers, and thus render the production of sound and well-developed fruit more sure. Many botanists think if it were not for bees and other insects, many plants would not fruit at all. What is the use of honey? The best observers will tell you it is secreted by the plant for the very purpose of attracting bees to the flowers or fruit. If all the bees were to be destroyed, I for one, a farmer, would prefer to go into some other business.

"Farmers know too well the injury various insects do; it is more difficult to determine the good done by hosts of beneficial insects. I believe every intelligent bee-keeper and naturalist will assent to the truth of the above remarks."—*Prof. Packard in "American Naturalist,"* 1869.

"BEES *vs.* FRUIT.—It is high time, we may add, that the Peabody Academy of Science were in full operation in Essex county when one of its towns voted to abate the nuisance of bees, on the ground that they are injurious to fruit."

"As to the nectar of the red clover being out of reach of the honey-bee, it may be asked whether this be the case with the second crop, in which the flowers are generally rather smaller. The much better seed of the second crop is thought to be owing to the greater abundance of bumble-bees in the latter part of summer."—*Prof. Gray, in "American Naturalist,"* 1869, *page* 160.

The Professor of Botany, Brown University, W. W. Bailey, says he "has no doubt of the great value of bees in the fertilization of fruit and other crops."

That bees work on over-ripe or bruised peaches, pears, raspberries and grapes when no honey can be found, is admitted. Where such fruit is of value, can be saved and dried or canned, there might be some loss if left exposed where there are large numbers of both wasps and bees near. The housewife saves apples from further decay for a time, by cutting out the soft spots; may not bees do the same in some cases by removing the free juice from the soft and bruised parts of the fruit?

It is noticeable that peaches and other fruits decay most in wet seasons, and these seasons are usually the ones when most complaint is made against bees. Prof. McLain found that grapes hung in a hive of starving bees kept longer than those left on the vines.—*Page* 338, *Agricultural Report*, 1885.

Fruit juice is a source of disease to bees, and if secured in any quantity is liable to cause the loss of the colony in winter. It is for the interest of all bee-keepers to exclude such stores from the hives.

THE TESTIMONIES OF A FEW PRACTICAL GROWERS IN OUR STATE might be of use here.

Mr. James A. Budlong, of Cranston, has grown cucumbers as a specialty for 40 years, and is of the firm of James A. Budlong & Son, the largest market gardeners in the State, if not in New England, especially as growers of cucumbers and pickle stock. He says, he would as soon try to raise a crop of cucumbers without water and manure, as without bees, in a closed greenhouse. Without them there would be no crop, they all run to vines, and the blossoms and small cucumbers drop off. With open windows he would expect part of a crop. He always places hives of bees in the greenhouses when the vines blossom. Furthermore, he says, for out-door crops, such as cucumbers, squashes, pumpkins, etc., he considers bees necessary though the wind does some of the work. A large apiary near by would not be unwelcome.

The greenhouse and garden products of Dexter Asylum, Providence, are probably next in extent to that of the Budlong Farm. Mr. F. B. Emmons, the one in charge of this work says he would get no cucumbers in greenhouses without bees. He thinks they are also of use in raising early melons. He has noticed that melons under hot-beds drop off until glass is removed or raised, also that squashes yield better since bees have been plenty about there. In his opinion they do not hurt fruit that is good for anything, though at times they work on pears, peaches, etc., that are soft. He believes wasps cut the fruit. He has noticed after very hard winters that there is hardly a bumble-bee to be seen, though several years later they will be plenty. Thinks if bees were more plenty through the State the farmers would be the gainers. On a stand built in a small walled-in garden patch were several hives of bees that had been of service in the greenhouse early in the spring.

Isaac Hazard & Son, South street, Providence, raise cucumbers under glass to quite an extent, and inform us that they find it necessary to have a hive of bees where they can visit blossoms in order to get a paying crop.

Mr. N. D. Pearce, of Norwood, is probably the largest grower of peaches in the State. He marketed 500 baskets of peaches the past season, and would have sold 2,000 if the wet season had not spoiled most of the crop. He does not consider bees his enemies, though they often work on peaches unfit for market. As to their importance in fertilizing the peach bloom, or insuring a crop, he could not give any decided opinion from observation.

Mr. F. H. Perry, the Providence preserver of fruits in glass, and who also grows and exhibits grapes, said his grapes at one time were cracked and covered with bees, which were sucking the juice, and he gave them the blame, but having seen it in print that honey-bees do not cut or injure sound fruit, he noticed more particularly, and found a yellow striped insect, two-thirds the size of the honey-bee, which might be the party doing the work, though bees were most plenty. Something punctured the grapes.

Robert Cushman, of Pawtucket, a prominent grower and exhibitor of different varieties of fruit, and especially grapes and pears, says he knows honey-bees work on cracked grapes and over-ripe peaches and pears, but says, "whether they ever break the sound skin of pears, peaches or grapes, I have no knowledge."

The Lewis Dexter Farm, near Lime Rock, has produced for many years, if it does not now produce, the greatest quantity and variety of pears for market, of any farm in the State, and it is a significant fact that in Mr. Dexter's day, and also while Mr. Plew (formerly Mr. Dexter's gardener), owned it, a half dozen or more hives of bees were a part of the live stock of the place.

The decision of the Supreme Court of Arkansas is, that bee-keeping is a legitimate business, and is not a nuisance, and that the city ordinance against bee-keeping in Arkadelphia is illegal and void. (June, 1889.) Some of the points in the defense of Judge Williams, who won the case before the court, may be summed up as follows:

Because people are afraid of bees, they are not a nuisance. They are no more liable to sting people than horses are to kick, or an ox to gore them, and no more of a nuisance than cows, horses, dogs and cats, and should have equal rights with them.

If because bees may sting they may be prohibited, then because cows may gore, dogs annoy the sensitive, by barking or biting, or running mad, we will also prohibit them.

Because vehicles may annoy by raising dust, or making a noise, or animals may run away in harness, we prohibit them. No such power is necessary, or given to Legislators or municipal bodies. Bees are property, and entitled to protection.

CONCLUSION.

We believe, and have endeavored to show, that bee-keeping is of sufficient importance to deserve the encouragement and protection of the State.

That bees are of great service to growers of various crops, as well as profitable to their keepers for their honey and wax.

That honey-bees do not injure sound fruit, and that the damage done to unsound fruit must be comparatively light.

That to prohibit bee-keeping is unconstitutional, and that no one need refrain from keeping them on account of opposition due to ignorance, fear, jealousy, or the ill-will of their neighbors (though all reasonable precaution should be taken to prevent annoyance or accident).

That this prejudice against bees is sure to give way to public opinion in their favor.

That a widespread knowledge of bee-keeping would increase the products of the State.

Kingston, R. I.

GERMANY.

Its Laws on Apiculture—Progress in Bee-Culture.

Written for the American Bee Journal

BY REV. STEPHEN ROESE.

Quite a number of German independent States have enacted laws for the protection of apiculture, thus aiding bee-associations by a certain stipulation, with the expectation that apiculture may keep pace with science and art, as a national industry. With this object in view, the question was presented to the 34th Wanderversamlung of the German Austro-Hungarian Bee-Association, at Regensburg, viz: How can bee-keeping be advanced to an important branch of industry?

Herr Roth, of Foerch (Baden), relieved his mind on this subject with a powerful appeal to the Assembly and German people. He stated, among other facts, that the various governments of Germany had taken decided steps for the advancement of horticulture, establishing nurseries all over the land, and the blessing of such institutions had brought industry among the people, and happiness to many hearts; and that apiculture was crying aloud for help and aid in this enlightened age of the world, to be permitted to keep pace with other branches of industry, promising a bountiful harvest to both stores and medical departments.

It is true, we have literature on apiculture for the advancement of this art, both theoretical and technical, among the country people, but these are insufficient to serve as a lever to lift this art and industry above the mire and sunken conditions, caused by low prices of honey and wax, winter losses, and spring dwindling.

The present age of the world, with its changeful atmosphere and climate, requires both theory and practice. If nurseries have the desired effect to improve fruit products, no less would nurseries in apiculture show to the public its golden fruits in food and medicine. Bee-keeping should be made a branch of study in our common schools—both boys and girls should understand the nature of the honey-bee, and its object of being called into existence by an All-Wise Creator, and the theoretical knowledge of the government in the hive would make early impressions, and lay a foundation in favor of law and order in many a youthful mind, and the proverb, "Go, thou sluggard, behold the industry of the ant, and learn," would leave lasting impressions in the minds of the rising generations through life.

The eloquent speeches of presidents of bee-associations are often worthy of admiration, and the essays and pointed instructions are highly appreciated by intelligent men and women. A Langstroth is reverenced for what he has done for the cause, and should have a place in the heart of every bee-keeper of the day, and not be in want, so near to his departure from among us. A Doolittle is admired for inventing a new method of queen-rearing and fertilizing; and a Root is looked up to, for making and giving to the bee-world many simple things. The advancing cause of apiculture is giving birth to numerous wide-awake periodicals, equally zealous for the one great truth, which so deeply impressed the mind of Aristotle — that apiculture must move onward; and the AMERICAN BEE JOURNAL is leaving no blank space, in its onward course, aiding in the elevation of our common cause, encouraging that which is honorable and true, and exposing deceptions, frauds, and lies.

But all this well-doing does not fill the bill. Bee-keepers, both male and female, you must raise your standard. With whom you come in contact speak a word to all for the cause, be it in season or out of season, and by all means think it worth while to answer even a foolish question of a child or youth. Early impressions are lasting. Many of the great men in the bee-ranks deeply regret that they did not have a glimpse into this honest industry in the days of their youth. What a power they would have been to the cause now; but, as the saying is, "It is better late then never," and "In union there is strength." A united effort of our experienced bee-keepers will have the tendency to make our periodicals instructive, spicy and palatable; a seasonable hint from experts in the cause, will aid digestion; and the result will be prosperity and success, and on lifting the curtain and looking about us, no horrible monster, killing the cow to get the milk, like the late Huber says, will come to our view.

Maiden Rock, Wis.

WHITE HONEY.

Why Honey is Whiter than that of a Few Years Ago.

Written for the Cincinnati Grocer

BY CHARLES F. MUTH.

Honey is one of Nature's purest sweets, valuable both as food and medicine. However, it is appreciated by few, comparatively, because not yet understood. The source from which it is derived, determines its quality. It is not generally known that certain flowers only furnish honey, and that different ones furnish different qualities, differing in color and flavor, and tendency to *granulate*. While the linden or basswood honey of the Northwest commences to granulate in September, or at the approach of cold weather, and has formed a solid granulation, making it as solid as leaf lard a few months afterwards, it requires a month or two longer for clover honey to assume the same solidity. Some qualities of Southern honey, and some of California, require a year or two before granulation is complete.

The granulation of honey is natural to the product, and no deterioration whatever. *Flavor and value in every respect* remains the same. Experts and judges of honey generally prefer it granulated, while the uninitiated, or parties unacquainted with its nature, suspicion adulteration as soon as their jar of honey begins to show a solid granulation.

The lack of knowledge of this matter has been as great a source of trouble to the dealer in his endeavor to convince his customer of the purity of honey as the variety of qualities. The taste of the public as well as that of the individual is cultivated to a certain quality of honey as well as to a certain quality of tea or coffee.

For instance: you may give the best Java coffee to a lover of Rio, and he will pronounce it "off" until he is used to the Java flavor. The same is the case with honey, and is illustrated by the following: Sometime last winter, we sent a keg of honey to the Superintendent of some public institution in Tennessee. It was a mixture of clover and linden honey, and considered by us one of the finest qualities in the world. When remitting, our friend remarked about as follows:

"What you have sent us is certainly a fine article—it is *too fine* to be natural honey. I shall not believe it to be genuine. The color of genuine honey is brown, and its flavor is not quite as fine as that of the honey you sent us."

Modern improvements, such as the inventions of movable frames, comb foundation, and the honey extractor, have produced a system for bee-keeping, and enabled the bee-keeper not only to exceed all former results as to quantity of the product, but also as to quality. He can keep separate almost all the principal qualities of honey from the different honey-yielding flowers as they develop in their turn and are made use of by bees. The process is simple to the intelligent bee-keeper, who must be acquainted with the honey-flora of his neighborhood, and the time of blooming.

In the southern part of Ohio, for instance, the principal honey yielding flowers are: the fruit blossoms during the latter part of April and the beginning of May, the locust blossom during the latter part of May, and the white clover during the month of June. This ends our honey season. Buckwheat, golden-rod, smart-weed, and other fall blossoms do not yield much in our latitude, but afford a large additional amount to the bee-keepers a few hundred miles further north.

The apple-bloom furnishes a very fine honey of a light brown color. The aroma of the apple-blossom cannot be mistaken. When late frosts of spring, during several years of our experience, had killed all peach-bloom, we learned that peach-blossoms yield a better nectar, consequently there will be no fine fruit blossom honey when peach trees are in bloom.

Locust is, perhaps, the finest of all honeys with the scent and flavor of the locust blossom, and a color of a rich golden yellow. The early season, however, with its inclement weather during the six or eight days of the locust bloom, prevent a regular harvest.

The only source we can depend upon in Southern Ohio, the season permitting, is the white clover bloom, the quality of its honey is appreciated by everybody, and needs no further description.

The poplar tree (American tulip) blooms in more northern latitudes, just before the white clover commences to yield, and furnishes a rich, light brown colored honey of very pleasant flavor. If not extracted from the combs before the clover harvest begins, then the color of the light clover honey is darkened by its predecessor from the tulip tree. Here, also the linden or basswood tree begins to bloom just about at the time when the white clover ceases to yield, and the first extractings are generally a mixture of clover and linden honey, both being of light color, and pleasant flavor, the mixture is appreciated by most parties as fine table honey.

It is estimated that bees must consume 30 to 40 pounds of honey to manufacture one pound of wax. This sweats out, in tiny little scales, between the segments of their bodies, which the bees take, one from the other, for the forming of their combs. By supplying a colony with sheets of pure beeswax, rolled down as thin as natural combs, and with the impression of the cells on each side of the sheet, a great deal of honey and labor is saved the bees. They show their gratefulness by proceeding at once to finish these wax sheets, work out the impressions and form regular cells in which to rear their brood or store their surplus honey as the case may be.

These sheets of pure beeswax (comb foundation) are fastened under the top-bars of the frames which are suspended in the hive; they are accepted by the bees and finished; regular honey-combs can be taken out of the hive as often as they are filled, emptied of their contents by means of the honey extractor, and returned to the hive to be filled up again, as long as the season lasts, and during every successive season for years afterwards.

The movable frame is the invention of Father Langstroth, formerly of Oxford, but now of Dayton, Ohio. Comb foundation and the honey extractor are German inventions.

Cincinnati, Ohio.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 719 of this paper.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct. 30.—Turkey Hill, at Wilderman's Sta., Ills.
A. Fehr, Sec., Belleville, Ills.

1891.

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Making a Simple Hammock.

An item on page 811 of the AMERICAN BEE JOURNAL for 1889, about a Christmas table, was helpful to us, and we adopted and enjoyed it. The new idea gave great pleasure to the younger ones, and but little trouble to their elders. In return, I would like to give the readers a picture of my hammock. It is not original with me, but is just as good as if it were. It is made of barrel-staves and four pieces of smooth fence-wire each 12 feet long—just a little bridge with the wire suspension at each side, woven over and under each alternate stave at the ends. My little eleven-year-old son made one in half an hour, with a little of my help. We like them better than the netting hammocks. Hang it near the bee-yard, and you will be surprised at the help you will get watching bees.

MRS. B. J. LIVINGSTON.

Ceuter Chain, Minn.

Specimens of Asters.

You will find enclosed two specimens of fall flowers—the one white, the other blue. What are they? Some say they are asters, while some say they are not. Please reply through the AMERICAN BEE JOURNAL.

Somerdale, O. C. E. MCCREERY.

[The lighter colored of the two is *aster tradescanti*, and the other is also an aster called Mexican purple, *Cosmos bipinnatus*. Both are excellent honey-producers.—ED.]

Bee-Keeping in Nebraska.

Our honey crop in this part of Nebraska is short, very few having taken any honey, though all the bees have enough to live on through the winter. I have 90 colonies, and only about 550 pounds of extracted honey from about 20 colonies; the rest I worked for comb honey, and used mostly drawn combs in the supers, with baits in every case, and I failed to get but one 28-section crate from the 70 colonies, so I am convinced that for this market it pays much better to produce extracted honey, for I think I can produce 3 pounds of extracted where I can get one pound of comb honey. Then I sell all I produce at home, at from 12 to 15 cents, while comb honey is slow sale at 20 cents a section, which seldom weighs a pound, and for this reason I induce my customers to buy the extracted, showing them that they get full weight, while with comb honey they get only 14 to 15 ounces, including comb, box and all. At this time I have only about 250 pounds left. Last season I sold all I had, and had to send to Iowa to get some for the trade; it was beautiful white clover honey, but was put up in a burnt-out whisky barrel, and it candied, and customers were afraid it was sugar, lard, or something else, but when they tested it, they invariably took some, and it was soon gone. Bees are all in good condition for winter, and are wintered in all ways—in chaff hives, out-doors, and also some Simplicity hives; then others in cellars; but for this latitude I prefer the cellar for wintering. There is scarcely any honey on the market, of any kind. I seldom place any of mine on sale in stores, only on special orders, and allow none sold for less than 15 cents per pound. This season I use the one quart Mason jars. R. R. Ryan.

Bradshaw, Nebr., Oct. 11, 1890.

Past Two Seasons' Results.

I commenced the season of 1889 with 71 colonies of bees in fair condition, but the latter part of May and first part of June about half of the colonies dwindled down to one quart, and some to about one handful of bees. But just as soon as warm weather began, they recruited right up. I worked 18 colonies for comb honey, and 53 for extracted, and secured 1,723 pounds of comb honey, and 8,635 pounds of extracted, beside 90 Langstroth frames of good, sealed honey.

In the spring of 1890 I took out of the cellar 90 colonies alive, which were put into the cellar Nov. 19, 1889. By doubling up, on account of queenlessness and spring dwindling, I had 75 colonies left. I worked 23 colonies for comb honey, and 52 for extracted, and obtained 79 pounds of comb honey, and 1,100 pounds of extracted honey, and increased them, by natural swarming, to 91 colonies, and each colony has from 25 to 40 pounds of good honey to carry them through the winter. This was the poorest season we have had here since I commenced keeping bees in 1866. Wm. Seitz.

Hustisford, Wis., Oct. 6, 1890.

Honey Crop in Iowa.

The honey crop here, as elsewhere, was almost an entire failure. There is no comb honey, and very little extracted; still, by careful management, I secured 42 gallons of extracted honey from 3 colonies, spring count, and 2 colonies increase by dividing. The honey is the finest I have ever had or seen. Last year 5 colonies, spring count, produced 130 gallons of extracted honey, and 12 natural swarms. This county is certainly very rich in honey, being high and dry, and large pastures. This year flowers were as abundant as ever, and the weather was favorable enough most of the time in July and August for bees to be out and at work, but there was no honey. In the forepart of the season the air was too damp; in the latter part, the ground was too dry. At first, not enough sap would evaporate to leave a large residue of nectar, and later on not enough sap would circulate. I do not believe, as so often stated, that heat consumes any nectar in the flowers, nor do flowers ever contain nectar before they open. A moist soil and dry, warm air are the most favorable conditions for producing a honey-flow. We had both the past summer, but not at the same time; hence our short honey-flow came, not when the air dried off and before the earth also became dry and hard. There is no late honey here, although the bees worked very late. Some have not enough for winter.

Taking Mr. Dadant's advice, I experimented somewhat with large hives this summer, and though the season was not favorable for the experiment, still I think they will prove a success. I winter my bees in the cellar, and have had no loss, except one colony, and that was caused by a mouse.

I think that Prof. Cook will have to admit, some day, that bees do "boil down" the contents of their honey-sacs "on the fly," whenever necessary. J. H. Stark.

Waukon, Iowa, Oct. 10, 1890.

Unfavorable Season for Bees.

The bees did not get much honey the past season on account of the dry weather, and now, while they might be getting a fall crop, it rains all the time. Honey sells for 12½ cents per pound here. B. E. Brown.

Prairie du Chien, Wis., Oct. 12, 1890.

Season's Results with Bees.

During the present season I obtained 85 gallons of extracted honey, and 580 pounds of comb honey from 23 colonies in the spring, besides increasing them to 43 colonies. The honey is all sold except 60 pounds of comb honey. The extracted sold at 75 cents per gallon, and comb honey at 12½ cents per pound. John Davis.

Birds, Ills., Oct. 11, 1890.

Results of the Past Season.

I started in the spring of 1890 with 40 colonies, all in good condition. The spring opened well, and the prospects were good in April, but May was cold and windy, June was too wet, and July was a total failure. August was the month for winter stores. My bees are in good condition for winter—better than I expected they would be. I had 14 swarms from 40 colonies; I divided 3 colonies, and that made 57 colonies in all. I obtained only 222 pounds of honey this year from 57 colonies. Those that winter there bees this winter will make something next year. This year will wipe out the fogy bee-keepers. My last year's crop was 1,500 pounds from 43 colonies. C. A. Goodell.

Mankato, Minn., Oct. 8, 1890.

Japanese Buckwheat, etc.

I had the Japanese and common buckwheat growing side by side, and found the bees working just the same on one kind as on the other. On marsh land, here on my place, the Japanese buckwheat stood up nice and straight, while the common was badly lodged. I shall keep the Japanese only for seed next year.

In this part of the country buckwheat is not generally considered a paying crop, but I have found it otherwise. For profit the ground must be well plowed with a breaking plow; next, well harrowed, and sown from ½ to ¾ bushel per acre. The ground should have the same culture that a thrifty farmer would give wheat ground, and sown about June 20. If these rules are complied with, there will not be so many disgusted with growing it. Cornfields that have been destroyed with wire-worms, are best for the crop—only the seed is to be sown and harrowed in, providing the ground is clean.

I commenced the season of 1890 with 40 colonies of bees in good condition, increased them to 55 full colonies, and doubled back to 50 colonies. I took off 150 pounds of comb honey, and fed 160 pounds of granulated sugar syrup. About half of the colonies gathered enough natural stores to winter on, and the other half I fed each from 3 to 18 pounds of syrup. My neighbors often ask me why the bees did so poorly this season. The best answer that I can give, is that the flowers furnished no nectar worth speaking of. To sum the business up, it is just a little discouraging, but as I have about $300 in bees and hives, I will stick to bee-keeping until I find just what there is in it by experience, before I drop it. C. A. Bunch.

Nye, Ind., Oct. 13, 1890.

Hunting Wild Bees.

Take good honey and a glass tumbler; go to where the bees work on the flowers, capture one in the tumbler, and cut a thin slice of honey, which lay on a strip of board or flat stone. Now turn the tumbler upside down, over the honey with the bee in. Place your hat over the tumbler until the bee is at work at the honey, then take the hat and tumbler away quietly, so as not to excite the bee; wait until the first bee has filled herself. If the tree is not over one mile away, the bees will return in 20 minutes, if not windy. When the bees begin to come in numbers, then mix the honey with water, but not too thin. If the tree is not more than ¼ of a mile away, the bees will return in 10 or 12 minutes, so you can know how far away to hunt. If two miles away, the bees will stay over an hour, if they return at all. I have tested this plan thoroughly. D. D. Johnson.

Summit Mills, Pa.

My Experience in Bee-Keeping.

I bought 5 colonies of bees one year ago in August, and made boxes for wintering 8 inches larger than the hive, almost waterproof. In the front I had an opening for the bees to get out, and in the space around the hive I put clover chaff. In March I fed the bees 35 pounds of granulated sugar syrup, right on top of the brood-combs, removing the pillow, and packed with rags. By the middle of May the hives were running over with bees, so that I hardly knew what to do. Soon the apple bloom came, and the wet and cold weather set in—poor little bees, how hard they seemed to work, but all in vain. They got some honey, then they commenced to swarm in June. I had 5 swarms, which I secured, and one went to the woods. I got 80 pounds of comb honey from clover. The 5 colonies have a nice lot of honey for winter—one has 13 Langstroth frames full. The old colonies are in good condition for winter, already packed as stated before. Jacob Moore.

Ionia, Mich., Oct. 13, 1890.

All Who Subscribe for the American Bee Journal can hereafter have our Illustrated Home Journal also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two: or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.'

HONEY AND BEESWAX MARKET.

DENVER, Oct. 13.—We quote: 1-lbs., first grade, 16@18c. Extracted, 7@8c. Beeswax, 20@25c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Oct. 9.—Market is strong at 17@18 cts. for white 1-lbs.; white 2-lbs., 16@17 cents. Extracted, 7½@8c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 13.—We quote: Fancy 1-lbs., white, 17@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@9c.; buckwheat, 6@7c.; California, 6½@7½ cents; Southern, 65@70c. per gallon. Demand good.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water st.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

KANSAS CITY, Oct. 8.—We quote: White 1-lbs., 16@18c.; dark, 12@14c. Receipts are light. We have received several carloads from California, of comb and extracted—1-lbs. we quote at the same price as native. We quote white 2-lbs. at 15@16c.; Extra C. and C. at 14@15c. Extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

ALBANY, (N.Y.), Oct. 14.—The market is in better shape than for several years, receipts are moderate, and demand is good. Buyers realize that the crop is short, but as sugars, syrups, and other sweets are cheap, caution should be used against getting honey above free consumption price. We are selling white extra, 18@20c.; medium white, 15@16c. Medium, 14@15c.; dark, 13@14c. Extracted—white, 9@10c.; amber, 7@8c.; dark, 7@7½c.
H. R. WRIGHT, 326 to 330 Broadway.

CINCINNATI, Oct. 18.—The demand for extracted honey is good, with almost no dark on the market. We have bought the second carload of California honey, for which there is a good trade; but it will not fill the place of Southern honey with many manufacturers. Extracted honey brings 5½@8 cents a pound. There is no comb honey in our market.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

* * *

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

A New Method of Treating Disease.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance, the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh, was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common-sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, *has ruined more stomachs than alcohol.* A circular describing these new remedies is sent free on receipt of stamp to pay postage, by Hospital Remedy Company, Toronto, Canada, sole proprietors.
51D26t 1m1y.

* * *

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

Advertisements.

For Sale! 25,000 pounds of the very **Finest COMB HONEY**, in scant 1-lb. Sections, put up in white Basswood Cases holding 12 Sections—glass on one side of the Cases, showing off the honey nicely. A very fancy lot. The price is **20 cents per pound** on board the cars here. Who wants the lot?

L. W. BALDWIN & SON,
40Atf INDEPENDENCE, MO.
Mention the American Bee Journal.

GROUND CORK
FOR
Packing Bees for Winter.

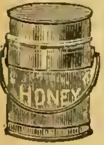
THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

NOTICE!
Our entire business has been Removed to
BEVERLY, MASS.
Address all Letters to E. L. PRATT, Pratt Bee Farm, Beverly, Mass. (formerly Marlboro, Mass)
3A42t

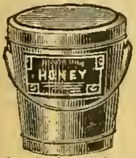
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon...holds 10 lbs ...	$1.80....	$12.00
½-Gallon, holds 5 lbs....	1.50. .	9.00
Quart, holds 3 lbs	1.20...	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25. ..	$ 1.50....	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

BEESWAX WANTED.

Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOS. G. NEWMAN & SON,
246 East Madison Street. CHICAGO, ILL.

......THIS CREATURE IS HERE TO......

ARREST YOUR ATTENTION!

We want you to wait before subscribing for your next year's Agricultural reading matter and

MAKE A TRIAL OF THE

Farm, Field and Stockman,

(A 20-Page Weekly Farm and Family Paper, at $1.00 per Year.)

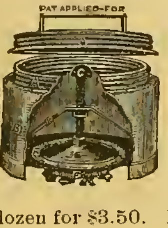
THE best is always the cheapest, especially when it costs no more. Some of our $2.00, $1.50 and $1.25 contemporaries have made claims that they are better. We want to give every farmer an opportunity to **make a fair comparison.** To this end we will send to any reader of this paper or his friends the **Farm, Field and Stockman** EVERY WEEK until Jan. 1st, 1891, including a **Mammoth Premium List,** for ONLY 10 CENTS in stamps. A handsome cloth-bound **DICTIONARY** of 30,000 words, will be sent **FREE** to any one who will send us a club of **10** subscribers at above price; or a complete **HOUSEHOLD CYCLOPÆDIA** (544 pages) for **20** subscribers.

☞ We make very liberal terms to club-raisers. In addition to **Premiums or Cash Commissions** we give **200 Special Premiums for 200 Largest Clubs,** worth from **$10** to **$500** each. Send stamp for our terms and Premium List.

HOWARD & WILSON PUBLISHING COMPANY, CHICAGO, ILL.

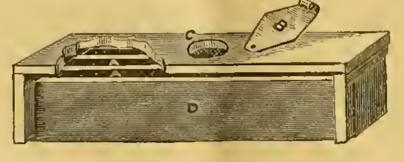
BEE-FEEDERS.

The Hasting's "Perfection" Bee-Feeder holds one quart, and the letting down of the food is regulated by a thumb-screw. The cover is put on securely. It is easy to regulate—either a quart or a spoonful can be given in a day or in an hour, as desired, and where it is needed most—over the cluster of bees. Not a drop of food need be lost, and robber bees cannot get at it.



Price, **40** cents, or one dozen for $3.50. Postage, 10 cts. extra on each Feeder. SPECIAL RATES to Dealers—Write for prices.

The "Shuck" Bee-Feeder, as here shown, may be placed at the hive-entrance, any time of the day, without danger from the robber bees. It feeds much or little, as may be wanted, and the food can be reached by the bees only from the inside of the hive.



Price, **30** cts., postpaid; by express, 25 cents each, or $2.40 per dozen.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILLS.

LOOK HERE!

BEFORE PLACING YOUR ORDER for SUPPLIES for 1891, get my Prices and Discounts.

Price-List FREE.

Address, **J. M. KINZIE,**
20A1y ROCHESTER, Oakland Co., MICH.

New Factory!

WE WILL soon be in our new Factory—which will be the largest and most complete in the world. We shall make the best of goods at lowest prices. We are ready for contracts for next season's Supplies. Write us.

G. B. LEWIS & CO., Watertown, Wis.
35Atf

Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

SPECIAL DISCOUNT

ON HIVES.

IN order to keep our factory running during the fall and winter months, we will make a discount of **10 per cent.** on all orders for Hives received before Jan. 1, 1891, and after that date, until March 1, we will make a discount of **5 per cent.** from our Catalogue prices.

The experience of the last season should prompt every bee-keeper to have his supply of Hives, etc., on hand before the season commences, and avoid the rush.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Muth's Honey-Extractor,

Perfection Cold-Blast Smokers,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHARLES F. MUTH & SON,
Cor. Freeman & Central Aves., CINCINNATI, O.

P. S.—Send 10c. for Practical Hints to Bee-Keepers.

AGENTS WANTED

in every Town and County in America, to solicit subscriptions for the **ILLUSTRATED HOME JOURNAL.** Will allow a Cash Commission on all Subscriptions obtained. This is a fine opportunity for active young people to easily earn several dollars a day. Particulars as to commission, etc., and sample copies of the paper, will be sent to any address.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address, **WM. McCUNE & CO.,**
43A1t STERLING, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Nov. 1, 1890. No. 44.

EDITORIAL BUZZINGS.

The May of life is sweet,
For blossoms scent the air;
But sweeter Autumn's somber days,
If golden fruits are there.
EUGENE SECOR.

Forest City, Iowa, Oct. 23, 1890.

It is Proposed to hold the last session of the International Convention at the residence of Messrs. Dadant & Son, about five miles from where the other sessions will be held. This will accommodate many who desire to visit their establishment, and who would not want to stay over another day to do so.

In agreeing to the proposition, Mr. C. P. Dadant remarks thus: "We have lately built a new bee and honey house, 20x32, which is not yet occupied, and would do for a dining-room, and Mrs. Dadant, Jr., feels equal to preparing, with a little help, one meal for the fraternity of the International American Bee-Association. So we might adjourn at 11 a.m. of the last day, and call up the closing meeting at Hamilton, after dinner."

It is still further proposed to sample the different kinds of honey and honey-cakes, which may be brought to the Convention. Mr. Root is to bring quite an assortment, and many other samples are expected.

Mr. Dadant also proposes "to start a subscription to offer a premium of, say $20, for the most palatable dish of any kind—cake, pie, preserves, etc., prepared with honey—the dish to be tested by competent judges at this meeting, and the manner of preparing this dish to be published" in the Convention report. This is a good idea, and we hope that many samples will be there to be "judged."

Honey from Red Clover.—P. C. Gween, of Smock, Pa., asks the following questions:

> Do bees work on red clover to such an extent that you regard it as a valuable honey-plant?
>
> I enclose flowers of a wild plant upon which I have seen my bees working with great energy. What is it, and does it produce much honey and pollen?
>
> I like "Bees and Honey" very much, and could not do without it. Same as to the BEE JOURNAL, which is a weekly visitor always welcomed by me.

The plant is an aster—and is excellent for honey.

Ordinary bees do not work on red clover to such an extent as to make it a valuable honey plant. When the nectar is plenty, or the corollas are "stunted" by drouth, the bees having the longer tongues get honey from red clover. The Italians and Syrians have longer tongues than other varieties.

◆

Bonanza Bee-House. — Mr. S. Braentigam went to the St. Louis Fair, and while there a hand-bill, being distributed, was given to him by some one who wanted to sell him a "Right" to build a bee-house. It was patented last year, but we imaging that the patentee will *not get rich* in selling the "rights," unless he works among those who know nothing about bee-keeping.

Is is said to save all labor—because the bees do not swarm at all! It saves buying hives for the same reason! It saves the honey from being eaten "by the worms or moths!" The bees do not die, etc., as they do in hives!

In his house, swarming is annihilated, and bees never die! He has a bonanza! But for all that, the bees will *swarm!* and they will *die*—house or no house!! Disappointment and disgust will be the only result to those who invest in the enterprise!

◆

California Honey.—The crop of honey in Southern California seems to have been a very large one this year. The *Rural Californian* for last month contains these figures:

> During the month of July, 1890, one firm at Newhall, Los Angeles county, Calif., shipped 224,635 pounds of extracted honey. Large quantities of comb honey are produced in the same locality, but most of it is shipped by the producers either to Los Angeles or San Francisco. About 350,000 pounds of honey have been shipped from the vicinity of San Jacinto during the months of July and August of this year. Most of the comb honey of that section was of superior quality, and has been sold.

◆

The Cause of the small honey crop for 1890 is thus stated by an exchange, and it is a very concise statement, too:

> The excessive rains and cool weather of early spring kept back the flow of nectar, and the drouth following in a greater portion of the country, has cut down the crop, and the returns this year will not be very encouraging.

A Colony of Bees.—A beginner, who is somewhat perplexed by the terms, "swarm of bees," "hive of bees," and "colony of bees," asks for definitions.

A swarm properly means the bees that leave the hive in natural divison—the bees that collect in a cluster. When put into a hive they will begin anew their labors, constructing combs, rearing brood, etc., thus establishing a new colony. The term "colony" is used to signify the bees of one hive.

A hive is the box in which the bees live and work. A hive of bees is often erroneously alluded to as a swarm.—*Exchange.*

◆

New Postal Cards are now being prepared by the Department at Washington. The Boston *Globe* says:

> There will be two new varieties, a large card, perhaps a third larger than the present ordinary card, and another size just the least bit smaller than the present card.
>
> "These cards," said Postmaster General Wanamaker, "will be very nearly a penny-postage. Their size will enable one to indite quite a lengthy epistle on them, all for one cent." But it is the pale-gray or pearl-colored card that will be the greatest bargain. It will not hold so much, but it is to be an uncommonly attractive affair.

◆

The Alfalfa Fields of the West are becoming the bee-keepers' paradise. Even California must now take a back seat. It is reported that alfalfa will not secrete nectar or furnish honey in the Eastern States, owing to the nature of the soil. This may be the case, as it is often true that honey-producing plants will in some localities produce honey and in others not. —*Exchange.*

◆

To Trial Trip Subscribers.—If this paragraph is marked with a *Blue Pencil*, it means that we have sent you the AMERICAN BEE JOURNAL, as agreed, for four weeks, free of charge. Your subscription for 1891 is respectfully solicited, and the earlier you send us $1.00 for the same, the more of the numbers of 1890 you will receive.

By adding 35 cents to the dollar before mentioned, we will send you the ILLUSTRATED HOME JOURNAL for 1891, with the rest of this year *free;* the November number of which will be sent you, as a sample, when issued.

◆

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1, 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals. This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

CONVENTION DIRECTORY.

1891. *Time and place of meeting.*

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

GLEAMS OF NEWS.

Rhode Island Apiculture.—The following is the spring report of the apiarist, at the Rhode Island Agricultural Experiment Station, taken from advance sheets of Bulletin No. 7. Part 2 :

Of the 13 colonies of bees wintered out-of-doors last season, all lived but one. This colony was the weakest when prepared for winter. The others were in fine condition April 1, the time of the first examination, and all were afterward built up into prosperous colonies. The two strong colonies and one weak one, placed in the farm-house cellar Nov. 6, were alive at this time, although the record kept by Mr. Adams of the temperature near them, showed the place had been much too cold and variable for the safe wintering of bees. From 42 to 45 degrees is generally accepted as the best temperature for a bee-cellar, while in this cellar, during February and March, the temperature ranged between 30 and 39 degrees nearly two-thirds of the time, and reached as high as 44 degrees but four times. On Feb. 26 the thermometer registered 26 degrees in the morning, 28 degrees at noon, and 27 degrees at night. On April 17, each of the 12 hives outside in the apiary had good patches of brood in from 2 to 6 combs, and quite a number of young bees, and the strongest were given as material for brood-rearing a quart of syrup at one feed.

Of the 3 colonies wintered in the cellar, all contained live bees, but upon examination, after they were removed to the apiary, the weak colony was found to have dwindled away to but a handful, the interior of the hive was also badly fouled, therefore the combs were given to other colonies. The other two had eggs and larvæ in a few cells, and nearly as much capped syrup as when placed in the cellar, and were strong in bees. The combs were somewhat soiled, and the outer ones were moldy, the result of low temperature and dampness. Both were packed in outer cases the same as the other colonies. At this time, maples were in bloom, and as there was an abundance of sealed stores in the hive, they were not fed. As with the others no more combs were left than were covered with bees, and the extra combs of honey were placed outside the division-board where they might visit them on warm days.

The bees wintered outside were strong and ready for the honey-flow the earliest. They had used more stores, but had its equivalent in young bees and brood. The past winter was very favorable to out-door wintering, and any colony of good strength having plenty of sealed stores, even if unprotected, should have wintered well. The cellar was unsuitable, its temperature at times going below freezing, however the colonies of good strength survived. The weak colonies, with plenty of good food, were lost under each method. Had the winter been severe, with long continued cold and a backward spring, the bees in a suitable cellar would, no doubt, have shown the best record.

Though in our winter preparations the arrangements considered most safe and convenient were adopted, and no competitive tests of the two methods were intended, the novice may learn something from results, and see the importance of having colonies strong for winter and spring, in order to have them sufficiently populous to best improve the time during the honey harvest, and realize the folly of attempting to winter several weak colonies, when a powerful colony may be made by uniting them. It is not, however, intended that he should receive the impression that it is advisable or safe for him to open hives previous to the first of May in this State.

SPRING FEEDING.

That the colonies might be buit up quickly and made very populous by the time of the honey-flow from apple blossoms, we desired that each should receive daily a small quantity of food to stimulate brood-rearing. As our visits to the Station at that time were made not oftener than once in ten days, the usual plan of regularly giving in a feeder a small quantity of thin syrup, could not be followed, therefore to accomplish the same, or similar results, we adopted the plan of feeding soft undissolved sugar in the hive. As with daily syrup feeding, though in less degree, this could not be done, without danger of greater loss than gain, until the weather allowed the bees almost daily flights.

Up to that time those colonies having sufficient stores were not fed, or their stores uncapped, empty combs only were given as required ; but early in May good moist sugar were supplied in frame feeders hung next to the brood-combs, and sufficient given to last until another visit. This was renewed as needed, and the result was all that could be desired.

As the apple bloom apparently failed to secrete nectar, the feeders were allowed to remain until sometime previous to the honey-flow from clover, when they were removed from all colonies that were to be used for honey-production ; and at the commencement of the harvest all combs of stores that might contain this feed were also removed and given to nucleus colonies. This method of

DRY SUGAR FEEDING,

as it is called, was brought before the public by Mr. Samuel Simmins, of England, and is described in various English books and publications on bee-culture, but we believe is little understood or followed in this country.

After several years' trial of the plan, on a somewhat extended scale, we do not hesitate to recommend it. It is well suited to the management of out-apiaries, where but occasional visits are made, and in all cases, though possibly in a dry country not so effective as syrup feeding, saves the trouble of making syrup, and the time required in its daily distribution, while the danger of the disastrous results of occasionally omitting the daily ration is avoided.

Instead of dry sugar, moist sugar like good grades of molasses and C sugar are best, but the former should first be well drained. This, placed in a feeder where the heat and moisture is confined, is slowly licked up or liquefied by the bees. The rapidity with which this is done depends upon the heat and moisture in the hive.

By placing an enameled cloth, enameled side down, over the frames in place of the porous covering, the loss of moisture, so desirable in freezing weather, may be lessened, while by removing the warm cushions or quilts from part of its surface, condensation of moisture takes place upon the enameled face beneath, and furnishes water to promote more rapid work.

The sugar may be placed in an ordinary syrup feeder, or wrapped in cheese-cloth and laid over the frames, but the arrangement we prefer and use here is similar to Mr. Simmins' pattern, and consists of a hollow dummy, having the same length and depth as the brood-frame, and a similar top-bar and a movable side that does not reach the top-bar by ¼ inch.

This is filled by removing the side, while the space at the top allows the bees access, and but little escape of heat. If the inside space is more than an inch wide, comb will be built therein.

This method of feeding is only suitable for spring stimulation, but is invaluable in a poor season to prevent starvation, for queen-rearing, for building up nuclei, and working for increase, or drawing out foundation, as well as for promoting brood-rearing after removing what is in some localities the only honey crop of the season. By using soft candy of best granulated sugar, it may be made to piece out scant stores in the fall. Samuel Cushman.

The Uses for Honey.—A correspondent in the *Iowa Homestead*, in an article on the value and uses of honey, says :

The extensive use of sugar on fruits is not as bad as the cake and cooky mania that rages in so many kitchens. The fruit acids largely neutralize the indiscriminate and injudicious use of sugar. It is no serious thing to eat considerable saccharine food in a pure state, but not in the form of pure refined sugar.

If eaten and taken in the form of honey, it at once becomes a valuable medicine and food. Instead of having it given us in this form in a mixture with bulk foods, as in the cane and beet, we have it mingled with fruit juices exuded from flowers, highly charged with medicinal properties in the alchemy of nature and the apothecary of the bee-hive.

The advantages of honey as a medicine or food are too extensive to be considered at length here. Honey taken as a food becomes a powerful medicine to the sugar-fed and half-diseased, and many must begin on small quantities and acquire an appetite for it.

Foul air, improper ventilation, coal gases, together with the sudden change and exposure of lungs and throat to zero weather, or worse, in a moment, is the source to no end of throat and bronchial troubles. A free, regular and constant use of honey is probably the best medicine for throat troubles there is, and its regular use would be largely corrective here. It is always best to take our medicine and food together.

New Subscribers can have the Bee Journal and the Illustrated Home Journal from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

Funny!—A correspondent in the Chicago Daily *Herald* of Oct. 16, asks the following questions:

1. Has any person the legal right to keep bees within the city limits, to the annoyance of the citizens?

2. Can City Councils declare the keeping of bees in city limits a nuisance?

To each question the answer given by the *Herald* is "Yes."

That a person has a legal right to keep bees inside or outside the city limits, is true; but they should never be maintained there when they become a *real* nuisance—and they may become such if kept uncomfortably near a highway, or a neighbor's residence. So the answer of the *Herald* should be modified a little—but we thank it for its emphatic answer to the question.

Of course City Councils may "declare" the keeping of bees a nuisance within the city limits as often as they choose, but the "law," as well as the decision of the Supreme Court, "declare" that bee-keeping is **not** *per se* a nuisance, and that City Ordinances declaring such foolishness cannot be enforced! And, more, that for any interference with the business of bee-keepers, by those who attempt to enforce such Ordinances, they may be held responsible for damages.

We have sent a copy of the Supreme Court decision to the editor of the *Herald*, and commend its perusal before answering any more questions.

In These Times ten cents buys a good deal of art and literature. For instance, "Frank Leslie's Illustrated Newspaper" of last week embraces 32 pages, including the last of the beautifully-illustrated Texas. It is full of pictures.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00.

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the BEE JOURNAL. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

A Restful Wish.

Written for the American Bee Journal

BY SAMUEL ROGERS.

Mine be a cot beside the hill,
A bee hive's hum shall sooth mine ear,
A willowy brook that turns a mill,
With many a fall shall linger near.

The swallows oft beneath my thatch,
Shall twitter near her clay-built nest;
Oft shall the pilgrim lift the latch,
And share my meal—a welcome guest.

Around my ivyed porch shall spring
Each fragrant flower that drinks the dew;
And Lucy, at her wheel shall sing,
In russet gown and apron blue.

The village curch beneath the trees,
Where first our marriage-vows were given
With merry peals shall swell the breeze,
And point with taper spire to heaven.

QUERIES & REPLIES.

Return to a Hive of a Queen with Clipped Wings.

Written for the American Bee Journal

QUERY 736.—Would a queen with a clipped wing crawl back to *her own* hive, if not attended to, or just as likely go into *another* hive, if permitted?—Ohio.

She is much more likely to go into her own hive.—C. C. MILLER.

I think she would go into the first hive she happened to find.—EUGENE SECOR.

If the queen does not get too far away, she will often get back into her own hive.—H. D. CUTTING.

She would go back to her own hive when the bees returned, if she could get there.—G. M. DOOLITTLE.

She would be as likely to enter another hive as her own, if the hives are close together.—M. MAHIN.

She might crawl back; but most likely get lost and never get back. The best plan is not to clip your queens' wings.—J. P. H. BROWN.

From past experience I find that at least 25 per cent. of the queens with clipped wings are killed or lost, by not crawling back.—P L. VIALLON.

She would be more likely to go back to her own hive, but might go into another if it was very near.—R. L. TAYLOR.

It makes no difference to the queen what hive she goes into "if permitted," but she had better not be "permitted" to get into the wrong hive.—A. B. MASON.

Generally she would, but there is some danger of her being lost in trying to enter other hives.—C. H. DIBBERN.

It is very difficult to tell what she may do. Usually some of the bees find her and remain with her wherever she happens to be.—DADANT & SON.

Such queens frequently get back to their own hive, but are often lost when they may attempt to enter another hive, if near.—G. L. TINKER.

No one can tell where she would go. Probably if she went into a hive at all, it would be into the first one she found.—J. E. POND.

She usually goes back into her own hive, but is quite likely to go into another, or to wander off and be lost.—A. J. COOK.

Should she get some distance from her hive she might crawl into a neighboring hive, and, of course, be killed. I do not advocate the clipping of a queen's wing.—J. M. HAMBAUGH.

Many times queens with clipped wings will crawl back into their old hives, and many times they will crawl off in the grass and die, or go into other lines.—JAMES HEDDON.

She will usually return to her own hive, where any disability prevents her from flying; but sometimes where hives stand closely together, we have had queens get to the front of the wrong hive and be balled by the workers.—MRS. L. HARRISON.

She will generally find the way back to her own hive, as she is very quick to hear the sound of the returning swarm. The queen's wing should be so clipped that she must crawl if she gets much distance from the hive. I clip off one pair (on one side only) of her wings, half way down. This gives her a whirling motion when she uses her sound wings in opposition to her clipped pair.—G. W. DEMAREE.

It is difficult to tell what such a queen *may* do, but she would probably crawl back to her own hive and enter with the returning swarm, unless other hives were very near, or she was destroyed by some bird or other enemy.—THE EDITOR.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Suceess,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Convention Notice.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec.

CORRESPONDENCE.

FOUL BROOD.

Origin of this Dread Malady Among Bees.

Written for the American Bee Journal

BY C. J. ROBINSON.

Pursuant to my promise recorded on page 520, I now proceed with the continuation of the subject of foul brood. I am cognizant of the fact that statements based on individual experience are generally taken for naught, if in conflict with popular opinion or preconceived notions. However, unprejudiced mortals oft-times learn of others who have acquired knowledge through research and special practice.

In my former article, I set forth facts showing conclusively that foul brood in all its phases is liable to, and occasionally does, originate in colonies by reason of the rotting of chilled brood; that is to say, in case the rotting proceeds by a chemical action favorable to hatching the inherent spores into microbes (micro-organisms), then foul brood is present. Whenever one or more of the microbes (though so small that they are invisible to natural sight) gets a lodging on live brood, the germ then feeds upon larva, and multiplies so rapidly by fission, that all the brood in a colony is soon a mass of foul virus, but the animate mass—microbes—though deadly poison to brood, cannot harm imago or full-fledged bees. The feeding of drugs, as antidotes, to bees, is blissful ignorance.

By accident, in 1882, some small frames having brood in, were left in a pile after extracting. The weather was hot, and when I came upon the pile a few days after the boy laid them down and left them, I found the combs in a stage or inordinate fermentation—putrefaction, proceeding to rottenness. It appeared so much like foul brood that I suspected it a case of spontaneous origination. I wrapped the fermenting combs in a wet blanket, and kept them warm until they were rotten. I felt so certain that I had foul-brood virus, that I thought to test it.

I took from a hive one frame having brood in it, after brushing every bee from it, smeared a small part of it with some of the rotten mass, and covered it with wire, wet so that bees could not touch the smearing, and returned it. Of the sequel, suffice it to say, that if the smearing did not reproduce true foul brood, I am not competent to test and determine. I have pointed out a way by which the problem may be solved. If any who care to know the facts will try—*secundrum artem*—the test, and fail to reproduce or originate true foul brood, then it will be in order for them to teach that foul brood never originates from chilled brood.

So recent as 1882, the time I announced my discovery of originating foul brood, there were none who would admit that foul brood is a "germ disease." Soon after, the germ theory was not disputed, for it became a well known fact, and now there appears high authority corroborating my claim that foul brood "is caused by the rotting of uncared-for brood."

I here quote from the official bulletin issued by the Ontario (Canada) Department of Agriculture, viz:

> Foul brood is a disease that is caused by the rotting of uncared-for brood. It usually originates in the spring, in weak colonies that have spring dwindled so badly that they have not bees enough left to cover or care for all the brood, and if the spring keeps raw and backward, the bees will crowd together to keep each other warm, leaving the uncared-for brood to die and rot in the cells. The brood covered by the bees in time to hatch, (which so increases the force of the colony that a wider circle of comb is covered by the bees), taking in the space occupied by the decaying brood.
>
> Foul brood will almost be a thing of the past, when every bee-keeper knows the real cause of it, looks well after his bees in the spring, and sees that the brood is well cared for in every hive, and those that are not really strong must be crowded upon a few combs, by using division-boards. The disease is spread by the bees robbing foul-broody colonies, and they carry the disease just in proportion to the amount of diseased honey they carry to their own hives.

So much of the bulletin as that which treats of the *cause* of foul brood I have, in my experience demonstrated; but Canadian bee-keepers, or scientists of Her Majesty's realm, first made known the most important discovery, to-wit: that foul brood is caused sometimes "by the rotting of chilled or dead brood." The writer of the bulletin seemingly takes to himself the glory of being the original discoverer of the "cause of foul brood." Eight years before the bulletin appeared, I published identically the same that is set forth in the first paragraph of the bulletin. (See *Bee-Keepers' Exchange* for August, 1882, also the *Kansas Bee-Keeper* of about the same date; and the same is set forth in my article in the AMERICAN BEE JOURNAL on pages 518 and 519 of this year.)

Because foul brood makes its appearance mysteriously, bee-keepers are loth to believe that it is possible for it to ever originate spontaneously from dead brood. The acute editors of *Gleanings* strenuously combat the assertion that foul brood is caused by dead brood. The junior editor comments on the above bulletin, and attempts to argue that the asserted claim is unreasonable. In their issue of Sept. 15 1890, Mr. Ernest Root mentions this:

> In another part (first paragraph) of the bulletin, before describing the method of cure, the cause of the disease is assigned to rotten or decayed brood, either from chilling or otherwise. In fact, the inspector, Mr. McEvoy, lays particular stress on this. We cannot believe that foul brood occurs without at least the germs of that disease. We (ourselves) have had a great many colonies in the apiary during the spring that had more or less chilled brood, but they (none of them) developed into anything serious. *Rotten brood may be a favorable medium for the growth of germs if they are already present in the hives* (Italics are mine), but we cannot think this of itself, a cause. We may have the very best of land in which to grow corn, but corn will not grow unless there is first seed.

He thinks that rotten brood is a favorable medium for the growth of *germs*. In this he errs. Everybody knows it is *live* brood that fosters the "*growth* of the germs." There can be no *growth* of germs in rotten brood, for the rot is germs. Dead brood is the medium in which the "ever-present" spores grow into foul brood germs. His reasons for, "we cannot believe," are based chiefly on the circumstance that *they* have not had chilled brood develop into foul brood. His point is not well taken, because it is not said that *all* cases of chilled brood pass into "anything serious." There are but few cases—one in hundreds—that chilled brood rots into foul brood. In warm, dry climates, foul brood seldom appears. It is in cold climates that brood is liable to, and often does, get chilled.

In Canada, bee-keepers are sorely troubled with foul brood in their apiaries. Hence the bulletin is issued as a special law providing for an attempt at eradicating foul brood from the realm. No such law, nor such waiting and weeping, and burning by inspectors, is known in the Sunny South. Will the "doubting Thomases" please explain the why of this difference.

Again, if as *Gleanings* speculates, foul brood is an eternized agent, created to curse, and stalks abroad, why does the "critter" deal out most of its cursing in cold regions? "Believers" or guessers, nor intuitive science is par for answering.

In the comments of the junior editor, referring to the growing of corn, he does not meet the issue. Hoosiers of the wild West, and foreign peasants—yea, "rustics"—have learned that to grow corn, seed must first be planted; but do they not understand, about the seed having a beginning? Some years ago the senior editor, in a foot-note referring to the claim that foul brood sometimes originates from chilled brood, used this illustration—the corn won't grow, unless corn—nothing else—be first planted. So here "we" find the first, the genesis of corn-growing, and all other things likened to it—ha?

Botanists inform us that "corn" is a native of North America, and all the different species first grew, not from seed corn, but grew spontaneous. New plants have appeared springing up of well-known plants where no seed of the species has been sown. What prompts spontaneous growth is a problem, and what causes the seed to germinate? What verifying influence puts vegetable growth into action? The only answer mortals can give is, the genial atmosphere, rendered life-giving by the rays of light which are absorbed. Not a particle of the "land" enters into the growth of corn or of trees. Even the ash, by being made liquid, is taken up in a re-growth, or eventually returns from whence it came—the atmosphere. The corn germs consists only of the elements of the atmosphere. The "very best of land" only acts mechanically in the growth of all vegetation—a medium for the elements, atmosphere and water. The fertilizing matter in soils is all composed of elements derived from the atmosphere.

The editor's reference to corn as a comparison, is speaking after the manner of prophets of old, but the likening of that which strictly pertains to the vegetable kingdom, with such as belong to the animal kingdom, is a sort of logic susceptible, perhaps, of a patent. Surely it has no pertinency in the issue they make in countering my claim, which is endorsed by the bulletin.

I concede that the able editors of *Gleanings* are esteemed high authority in bee-matters, but I do not concede that their conclusions are facts.

The fact that foul brood originates under certain circumstances from uncared-for dead brood, is a very important matter, for the due consideration of bee-keepers, especially those in cold climates. Scribes who are of no importance may teach that it matters not about fine-spun theory and hair-splinting science—"we have to deal with foul brood, and it is not important to us, anything concerning its origin." Such apiarists, by neglecting to care about the subject, and not caring for dead brood, are momentously liable to suffer by foul brood. The neglect to care for dead brood is all-important, because it is the prelude to foul brood—the seed-bed of the disease.

Richford, N. Y.

* * *

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 735 of this paper.

A VISIT.

Different Kinds of Honey—Cave Cellar, etc.

Written for the Western Plowman

BY C. H. DIBBERN.

While wife and I were returning from a visit to Eastern Illinois, we found that we had a couple of hours to spare at Peoria. The thought soon suggested itself, why not call on Mrs. L. Harrison, that matchless lady bee-keeper, and able writer on bee-culture.

The street cars soon landed us within a block of her residence, in the suburb of the city. We were soon attracted by the long rows of hives, and we almost involuntarily exclaimed, "That is evidently the home of Mrs. Harrison!"

We found Mr. Harrison in the apiary with a scythe, cutting down the weeds in front of the hives, but as soon as we entered the gate he came to greet us. We found him a very agreeable gentleman, of middle age, and familiar with many subjects besides bee-keeping.

We were shown into the parlor by a young lady from Missouri visiting there, and Mrs. Harrison and their daughter Kate soon appeared. Altogether, we found the Harrisons as we had expected, to be bright and charming people.

Of course we had a short "bee-convention." A question from Mrs. Harrison convinced me instantly that she is a deep thinker, if indeed I had ever heard a doubt of that before. It was this: "Why is it that an egg, that would have produced only a worker-bee, will produce a perfect queen when placed in a queen-cell?" I answered as best I could, that I presumed it was on account of the size and shape of the cell, and the royal food placed there by the bees. This seemed to satisfy Mrs. H., but I must own that I felt that I would rather not try to answer any more difficult questions, or my reputation as a bee-master might come to grief.

DIFFERENT KINDS OF HONEY.

To most people "honey is honey," and this idea seems to prevail among store-keepers, when they fix an arbitrary price on this product. The fact is, however, that there are as many kinds of honey as there are of apples, or of any other fruit. The quality is determined almost entirely by the bloom from which it is gathered, and varies greatly. While it is difficult to get the honey from one variety of blossoms separate, yet the prevailing kind generally regulates the quality.

The atmospheric conditions also have much to do with the quality, as it is well known that the honey gathered in a reasonably dry time, is much superior in flavor, richness and thickness, to that produced in wet weather. When this great difference in quality is once understood, why should there not be a corresponding difference in price? As it is, however, dealers generally make very little difference, and the advantage is always in favor of the poorer article.

I well remember trying to sell some very fine honey, that was faultlessly white, built in neat whitewood pound sections, and crated nicely in new crates. I was told, "Your honey is very nice, and we would like to buy some of it, but your price, 15 cents per pound, is entirely too high. Why, we are selling honey at 10 cents." When I asked to see some of this honey, the store-keeper brought out a jar of broken stuff, that had probably been cut out of some box-hive after the bees had died. Now, why should not a fine article of honey sell as readily for a good price as a bushel of nice apples, or any other superior article? What inducement is there for us to go to considerable extra expense to have our honey as fine as it is possible to get it, if we are to get nothing for our extra trouble?

A CAVE CELLAR FOR BEES.

We have just completed a cave cellar for our Mill Creek Apiary. I have often thought I should like such a place for wintering bees, and I have now got it to my entire liking.

The apiary is situated on a high knoll, surrounded on three sides by the creek. The bank on the east side is quite steep, and into this we dug the bee-cellar. We made the size 14x16 feet, and 6 feet high. The ground was somewhat higher than the top of the cellar on the upper side, and the lower side was on a level with the floor. The lower side was built up by making a 3-foot wall of boards and filling in with the clay removed from the cellar. The sides are also boarded up from the floor, and the roof is also of boards, supported by props. The roof is covered by about one foot of dirt, and a second roof is put on this, to shed the water.

This second roof is also a great protection against the sun, for contrary to general belief, the difficulty of successful wintering does not depend so much on keeping the bees warm enough in winter, as to keeping them cool enough in early spring. Judging from all my experiences in wintering, the bees should winter perfectly in this cave, and I will report the result later.

Milan, Ills.

ILLINOIS.

The State Fair Bee and Honey Exhibits.

Written for the Prairie Farmer

BY MRS. L. HARRISON.

People who do not go to the Fairs have no idea of the good times that we old, Fair-going bee-keepers have. Jolly times, and long to be remembered, holding mutual-admiration meetings around the honey exhibit. Friendships are there formed that last for a lifetime.

Although the past season is the poorest one known to modern bee-keepers for the production of honey, there was a good exhibit of both comb and extracted honey.

One bee-keeper from Iowa had an exhibit that would have filled the whole space allotted for this product by the Fair-Association, and yet he had goods unpacked. He was indignant that he was not able to display his exhibit, and a little "riled" when his hives, sections, etc., were called carpenters' stuff, and when he was ordered by the Superintendent to get them out of the way, so that visitors could pass around.

It does not appear right to me that such a great industry as the production of honey and the rearing of bees, which are essential in the fertilization of the bloom of fruits and clovers, should have to take a back seat in order to give place to a real-estate advertising-scheme from Nebraska, with a big stuffed sow and a litter of pigs.

I doubt very much if the grain used in this display ever saw the State of Nebraska, for, when I reminded the exhibitor that he ought to show the honey from that State, he asked me to sell him some to put with his exhibit, to take to St. Louis.

Fully one quarter of the building devoted to agriculture was occupied by these real-estate advertisers, to the detriment of honest tillers of the soil.

When a bee-keeper requested space to exhibit his fixtures, he was told to take them out-of-doors—to a corner of a platform—and show them there.

What matter, if a few bee-keepers are discommoded, provided that the railroads and land-boomers from another State are accommodated? They pay two dollars and get the whole end of a building for a "hog palace," containing a lop-eared sow with five pigs, when Illinois has better ones with eleven following each of them. Much finer ones could have been seen alive and grunting in pens devoted to their use.

"Observing hives," containing bees, had to be packed closely together on the floor, in such a way that their contents could not be seen. Ventilation was very poor in this building, and many bees died. How gladly would I have put that miserable apology for a hog (a regular straddle-bug), out-of-doors, and given the producers of honey a chance! My command would have been like that of the gentle Galilean: "Take these things hence."

My own toes were not trod on, for I had nothing on exhibition in this department except extracted honey, and I was given sufficient space to exhibit it.

WHO TOOK THE BLUE?

Why, Iowa on both comb and extracted! "Tell it not in Gath." If I am not mistaken, there was not a pound of comb honey on exhibition from the State of Illinois.

The Iowa exhibit of extracted honey was in fancy small pails of glass with metal tops, costing 13 cents each by wholesale. These pails will be awarded the blue at all Fairs wherever they go, over packages put up in the best marketable shape. Why shouldn't they, for they are so pretty, and people like gilt.

QUEEN-BEES.

A number of these were on exhibition, and a breeder of this little stock claimed that half a dozen of his were stolen. The theft could not have been committed by a bee-keeper—for bee-keepers are all honest—but by some collector of insects who inferred that they were of no value, and belonged to some crank.

What a pity that these fine queens should have a pin run through them and be stuck onto a block labeled, *Apis Mellifica.*

Peoria, Ills.

[The Managers of the Illinois State Fair have long been a disgrace to the State. The premiums on bees and honey are ridiculously small, and their rulings show their incapacity. For these reasons the exhibits have been very small, and crowded for room to properly show them.—ED.]

HIVES.

Advantages Derived from Using Large Bee-Hives.

Written for the American Bee Journal

BY BYRON HAMS.

On page 265, Mr. A. J. Fisher calls for a discussion of large *vs.* small hives. I have used all sizes, and if my crop of honey was from basswood or clover only, I should practice the Doolittle plan; if my crop was like the Dadants'; or, as I suppose their crop is, viz: first, white clover the last of May, through June and the first week or two in July; second, smart-weed more or less on until golden-rod and Spanish-needle bloom, which is generally about Sept. 1, which, in a good season, would make almost a continual honey-flow from about May 20 until frost, with a short rest the last of July and first of August. I have some little acquaintance with their locality, and I think it is about the same there as here; such being the case, we want large hives, and a large brood-nest the year round. We get a good "board-bill" out of the large army of workers that Mr. Doolittle objects to. I have never had too much brood or too many bees at any time of the season to suit me, and I let the queen have full sway at all times. My greatest trouble has always been to keep room enough for the queen; nearly always I have to extract the lower frames. I use a 10-frame Langstroth hive, and often have them three stories high.

An advantage of no little importance with the large hive and non-contraction, is the winter stores and the quality of the same. It is no little satisfaction to me to know that my bees have an abundance of the very best of honey for winter, and, wlth the Muth plan of wintering, I can rest content in full confidence that my bees will greet me with a glad hum the next April, and be ready for the clover "when it comes again."

If I should have any little, puny, sickly colonies, that need division-boards, and all the extra fuss of side-packing, and giving an extra comb every three or four days, I would double them up until they were strong enough to take care of a 10-frame hive with 10 combs in it, and let them do their own fussing afterwards. With a large hive, and plenty of good stores the year around, we are blessed with but few such colonies.

Worcester, Mo., Oct. 15, 1890.

WINTERING BEES.

The Elements of Successful Wintering.

Written for the New York World

BY B. BENJAMIN.

While many successful bee-keepers winter their bees on summer stands, I think that the majority of Northern apiarists favor wintering in cellars. Dry, pure air and a proper and uniform temperature are the 2 prime essentials in successful wintering; these, in my opinion, cannot be so perfectly controlled out-of-doors as in some suitable place in-doors.

To insure dry air, the cellar must be a well drained one, with bottom cemented, and walls plastered to prevent moisture from passing through. Next it must be warm enough to prevent freezing, and provided with sufficient ventilation to admit of the escape of the heat and gases generated by the bees. The temperature most to be desired is 45° Fahr.

A portion of the cellar ought to be set aside especially for the bees. When presentable, I would locate them in a solid body in the center of the room—never close to the ends. Let the hives rest a foot or more from the bottom of the cellar, and upon each other, being careful to break joints and get the weakest colonies on top.

This work should be delayed until the autumn is sufficiently advanced to chill the bees a little, so that they will not be too active; avoid, however, the other extreme of waiting for cold weather. When all are nicely piled up, exclude all light. Mr. Newman advises entering the bee-department every fortnight with a dark lantern to see that all goes well.

If the thermometer indicates above 45°, admit cold air; if below 40°, which ought not to occur, partly close the ventilator to bring the mercury up to the desired temperature.

Mr. Newman and Prof. Cook agree that each colony should begin the winter with 30 pounds of good honey.

I have never weighed mine, but believe it would be a good plan. Some bee-keepers resort to small stoves to keep their cellars warm enough, others depend on the warmth from a fire in a room above the cellar, while others again connect it by a shaft or pipe with the stove above. By this latter plan the cellar is ventilated with warm air.

Queen's County, N. Y.

BEE-PERIODICALS.

Our Apicultural Literature, and Publishers.

Written for the American Bee Journal
BY REV. WM. F. CLARKE.

Some months ago, Mr. W. Z. Hutchinson remarked editorially in his *Bee-Keepers' Review*, that the bane of apicultural journalism was the cutting down of subscription prices, and its attendant competition of cheapness.

As an illustration of this, we find Mr. Alley saying in a recent issue of the *American Apiculturist*, "we cannot afford to pay for articles except in rare cases." Of course not.

But Mr. Alley proceeds to add, that "paid-for articles are not so good as those we get for nothing." He further asserts, that "when a fellow is getting $5 for an article, he is working for the $5, and not for the interest of those who will read his, sometimes (yes, almost always) long-winded sermons." He winds up with the coaxing remark: "Now if bee-keepers will give their experience in their own apiaries, or that of some neighbor who cannot or will not write, we shall have all the interesting matter we can use."

Mr. D. A. Jones, of the *Canadian Bee Journal*, copies the article from which the above extracts are taken, and endorses it as follows:

> Henry Alley does say some sensible things, and among others, he voices our sentiments in regard to the above. When we say "our sentiments," we do not wish to be understood as meaning that all those who write, do so for the mere love of gain, but there is often a certain tell-tale style about them that is easily recognizable.

I want to say a few plain, but not unkind words, about the foregoing utterances by this brace of apicultural editors.

Mr. Alley is very sweeping in what he says about "paid-for articles." Mr. Jones endorses him with somewhat "bated breath." But both are in the same box as "accusers of the brethren." They distinctly convey the idea, one that *all*, and the other that *many* of those who have received pay for contributions to the bee-periodicals—have written "for the love of gain," and not for the interest and profit of their readers.

Now, I do not hesitate to give this charge a point-blank denial; and I regard it, moreover, as a gross and gratuitous insult to apicultural writers in general. I know it is not true in regard to myself. I have received kind and liberal pecuniary acknowledgements for many of my articles that have appeared in the bee-periodicals. I have also written a large number without fee or reward, and I can honestly say that I never penned one, whether it was paid or unpaid for, with any other motive than the good of the bee-keeping public.

Nor do I claim to be a whit more unselfish than the rest of the quill-driving fraternity and sisterhood who have written for the bee-periodicals. The idea of such men as Prof. Cook, Messrs. Heddon, Doolittle, Corneil, McKnight, Holtermann, Dr. Miller, and a host of others that might be named; and of such women as Mrs. Harrison, Cyula Linswik, Mrs. Chaddock, Mrs. Axtell, and many more literary as well as bee-keeping ladies, writing merely for "filthy lucre," is too absurd to be entertained for a moment, and I am persuaded, will be scouted by the great mass of bee-keepers all over the North American continent.

In the first place, it is foreign to the true literary instinct to write merely for pay. When, in Dr. Watts' childhood, a farthing, the smallest English coin, was offered for the best bit of boy-rhyme, the future poet betrayed the budding forth of genius by producing the following couplet:

> I write not for a farthing, but to try,
> How I your farthing writers may outvie.

That's the intuitive feeling of everyone, old or young, who is under the influence of the genuine *cacoethes scribendi.*

Next, every apicultural writer of any note has been prompted by interest in bee-keeping to put pen to paper. If Mr. Alley knows "a fellow" of whom this not true, let him *name*. He dare not, and he cannot. Interest in apiculture, and desire to advance it, have developed many into interesting writers, who, otherwise, would never have discovered that they had a talent in that direction. A. I. Root is a conspicuous example of this. His great ability was unknown to himself and others, until he began to write articles for the AMERICAN BEE JOURNAL under the modest *nom de plume* of "Novice."

Again, why is it assumed that every one who receives pay for apicultural literary work is mercenary, sordid and selfish? Time is money, ink-slinging is labor as really as honey-slinging, and "the laborer is worthy of his hire." Do Messrs. Alley and Jones take pay for their hives and other "bee-fixins'" for "the mere love of gain," without concern to give value for value? If they are not mere "money grabbers," why do they judge those to be such whose *forte* is not in hive-making and queen-rearing, but in helping to diffuse apicultural knowledge by means of the press?

This kind of slur comes with an exceedingly ill-grace from Mr. Jones. No man owes more to the pens of others than he does. He cannot write an article fit to be read, and his best effusions need a great deal of touching up by some one who knows how to do it. Does Mr. Macpherson work for nothing, in putting Mr. Jones' ideas into readable shape; or in getting pay for what he does, is he only concerned about his net receipts?

Like queries might be asked about men in all the walks of business. There are mercenary men everywhere, but the great mass of those who live by honest industry, are anxious to give an equivalent for every dollar they receive, and cannot be justly reproached because they take pay for their work.

The remarks of Messrs. Alley and Jones are deadly shots fired at the whole army of wage-workers—themselves included.

What is it but asking alms like a mendicant, for Mr. Alley, or any one else, to say to a bee-keeper, "Please *give* me an article detailing your dear bought knowledge, experience and best methods?" The shrewd, sensible, and big-hearted editor of the *Review*, W. Z. Hutchinson, sees this clearly enough, and though he has fought his way into the chair he fills so well, though a sea of difficulties that would have engulfed almost any other man, is able to say, with honest pride, that he has paid for nearly every article that has appeared in his journal, and that when it comes to *begging* articles he will have done with bee-journalism. He also says, and it hits hard in certain quarters, that the editor of a bee-periodical who depends on the stray scraps of information that come in at hap-hazard, stands a poor show in comparison with one who has at his command the pens of the most experienced apiarists and the best of writers.

I am a Canadian, proud of my country, and among its other products, proud of the galaxy of bee-keepers it can boast, but I shall never cease to regret the fact that here "the first $1 weekly" was born into the world of apicultural literature. It would never have been done, had counsel been taken with representative Canadian bee-keepers. No man is more sensible of Mr. Jones' many excellent qualities, and of the eminent services he has rendered to bee-keeping; no man has been and is more ready to acknowledge these, by tongue and pen, than I; but, in his foolish ambition to be the Great Mogul of apiculture, he was unwilling to leave any sphere for others to fill, and determined to have "no rival near his throne." The results of his grasping, monopolizing spirit have been disastrous in many ways. Bee-literature has had to be published at prices that did not afford a living profit to editors and contributors; here in Canada, we have only half a bee-periodical, when we might have had a whole one, as good as the best; and a pauperized, "Cheap John" air has been thrown around the whole pursuit.

The approaching International Convention could not do a better thing than take up the state of our bee-literature with a view of creating a more just and generous public sentiment among bee-keepers, and a willingness to pay something more like "value received" as the subscription price of such apicultural journals as have honestly earned the right to live, by being willing to "let live," and "help live."

Guelph, Ont.

IN COUNSEL.

Report of the Union Bee-Keepers' Convention.

Written for the American Bee Journal

BY DANIEL SHANK.

The Union Bee-Keepers' Association met at the City Hall in Hamilton, Ills., at 1 p.m., on Oct. 10, 1890. There being present at the hour of opening, President S. N. Black, Daniel Shank, Secretary; W. Williams, Treasurer, and several others. The minutes were read and approved.

The first question was, "Extracted honey; how to obtain it, and how to dispose of it," and was answered by C. P. Dadant.

"How to get the most prolific queens," was answered by T. S. Wallace.

S. N. Black asked: "How old must a queen be when she mates with a drone, in order to become a prolific queen?"

Mr. Wallace said: From 10 to 12 days. She will then lay in 3 or 4 days after mating.

Mr. Black asked: "Has any one had experience in rearing queens in the upper stories of hives?" No one present had ever tried it.

Question: "Are half-blood queens larger than those of full-blood?" Mr. Wallace and Mr. Dadant both replied, Yes.

Question: "Which is the best, pure Italians or hybrids?" Mr. Dadant answered: Full blooded Italians.

Mr. Dadant asked Mr. Wallace: "Do you select your drones with reference to color?"

Mr. Wallace: Yes, I select my best and yellowest drones.

Mr. Dadant said: Quality cannot be measured by color.

Mr. Wallace: My most prolific queen is a half-blooded Italian.

Question: "Are the drones of mismated queens pure as to the mothers' stock?"

Messrs. Dadant, Black and Wallace all answered, Yes.

Question: "Does the color of the drone have anything to do with the purity of the colony" Mr. Dadant answered, No.

Mr. Lefler: "How do you rear the most prolific queens?"

Mr. Wallace answered: My old plan was to take the best queen out of a pure colony, then cut out the queen-cells from the same hive and graft them into the combs of a queenless colony. By my new plan, I now rear them in the parent colony, by putting wire-cloth cups over the queen-cells. By this method you can leave the queen in the hive all the time.

Mr. Black said: I get a prolific queen by feeding the colony liberally early in the spring.

Mr. Dadant said: A queen reared from a worker egg from 3 to 6 days old, is as good as a queen reared from eggs in queen-cells.

Question: "Are the characteristics of drones as important as those of queens in producing prolific queens?" Mr. Dadant answered, Yes.

Mr. Ogle said: The best time to rear a prolific queen is during swarming time. Take out 2 or 3 frames of brood and make nuclei. I find that such queens are best.

Question: "How would you decrease the number of colonies?"

Mr. Wallace answered: Double up the weak ones in the fall, and select the best queen. Do your work about sundown, and smoke both colonies thoroughly while uniting them.

Mr. Dadant said: I use peppermint diluted with water, sprinkling them freely while uniting the colonies.

Mr. Ogle: I unite colonies by putting one on the top of the other; putting wire-cloth between them, for a few days; then I draw it out. Of course I killed one of the queens when first put together.

Question: "Has any one tried the queen-excluding honey-board?"

Mr. Ogle said: Yes. The queens never get through it. I was well pleased, and I think I obtained more honey in that way.

Mr. Dadant said: Queenless colonies never kill drones.

Mr. Black said: When a colony of bees in September, and later, are full of drones, I am sure they are queenless.

Question by Mr. Black: "Have drones been plenty in your colonies during the season just past?" Messrs. Dadant, Shank and Wallace answered that the drones were very few.

Question: "How do you reduce drone breeding?"

Mr. Dadant answered: Cut out almost all the drone comb, early in the spring; graft in worker-comb, or use comb foundation.

S. N. Black said that he thought that matured drones eat a great deal of honey. He also thought that black queens and Italian drones produced the best of all hybrid bees.

Question: "Are drones good for any other purpose than breeding?"

Mr. Dadant answered: No; one good colony with drones is enough for a whole apiary.

Question: "Why do bees sometimes desert their hives, leaving plenty of honey and brood?"

Mr. McDaniel said that he had such experience, but knew of no cause for it.

Mr. Black and Mr. Wallace had the same experience, but neither could give any good reason.

A motion was made and carried to adjourn, to meet the next morning at the residence of Mr. Dadant.

On the morning of the 11th inst., the meeting was called to order at 10:45.

The following report of colonies of bees, and honey gathered, was made by those present:

	Colonies in Spring.	Pounds of Honey.	Colonies in Fall.
S. N. Black	60	200	75
H. Ogle	60	300	63
Thos. Wallace	126	500	126
Geo. Williams	19	400	20
D. W. McDaniel	100	800	107
Chas. Dadant	400	6000	400
Daniel Shank	18	300	18

A bill of $2.10, for badges, was allowed, and ordered to be paid.

It was, upon motion, decided to hold the next meeting at Clayton, on the call of the executive board.

The election of officers resulted as follows:

President, S. N. Black, Clayton, Ills.
Vice-President, C. P. Dadant, Hamilton, Ills.
Secretary, Daniel Shank, Clayton, Ills.
Treasurer, T. S. Wallace, Clayton, Ill.

A motion was made and carried that we affiliate with the International American Bee-Association, and Daniel Shank was elected a delegate to the Convention to be held at Keokuk on the 29th inst.

On motion, the Convention adjourned. DANIEL SHANK, *Sec.*

HELP

By Our Societies—District, State and National.

Read at the Southwestern Wis. Convention

BY N. E. FRANCE.

There is not an honest, honorable industry in America but what has its periodicals and societies devoted to the advancement of its particular work. The successful ones are those that carefully read and investigate, attend their conventions, and apply, by actual experience, the knowledge learned. It is so in our industry. With all our literature and the various societies, it is strange there is so much ignorance and lack of systematic knowledge.

At our Farmers' Institute last winter, some farmer asked Gov. Hoard what was the best crop to depend upon for Wisconsin farmers. He replied, "Cultivated brain and muscle." That is the object of these institutes, to stir up ideas, by holding counsel together, and then go home and apply what is learned.

Apiarists cannot afford to be without bee-literature, and so far as they can afford, should attend our societies. If there is any subject in bee-culture you do not understand, the best way that I know of, is to carefully study the views of others, through our literature, and then write your own. Send it to some bee-paper for publication, and soon this subject will be at your command.

One of the reasons why our meetings do so little good, is because we do not post ourselves; and then we go to the convention as a drone, and listen to what is said—saying nothing in return.

If you have something you think an improvement, either in management, or in the line of supplies—bring it to the front, and show it to others at our meetings and in the bee-papers. For instance: One likes his method of wintering or swarming, kind of extractor, section-box, hive, or what ever it may be, better than any he ever saw. Let us all see it, and quite likely by comparing notes, you will see where you can improve.

Some one says, I am no speaker, let some one else talk. If we all followed this mum-style, what a quiet meeting it would be, and no one would be benefitted. Whoever heard of a bee-keeper who was anxious to learn, finding fault with his brother apiarists for expressing their views?

Some years ago there was a similar organization to this—of the Southwestern Wisconsin bee-keepers. They had several meetings here, and some in neighboring cities. Where is it now? Dead! Simply because very few were willing to take an active part in it! Have we met for a like history? No. We have no drones in our society; they are all workers.

Let us look at the history of our "National Bee-Keepers' Union." It was oranized in 1885, to protect the interests of bee-keepers, and to defend their rights.

In 1885, a case was taken into court at Richland Centre, against our neighbor, Mr. Freeborn. The Union made such a stir in the matter, showing such fighting enthusiasm that there would have been a lively time had there been a trial, on the merits of the case. The Union paid $131 to defend the case, and we are to-day reaping the reward of the victory it gained.

Then there came the California grape suit against Mr. Bohn, which the Union brought to a successful issue.

Also the case of manufacturing comb honey, in which our Secretary (Mr. Newman, of Chicago,) compelled Rev. Robert West, in his paper and other papers, to retract his statement "that bee-keepers now manufactured comb, filled it with glucose, and capped the so-called honey by machinery."

The next year the Postmaster at Griffin, Ga., refused to receive queens in the mail because of attending workers, claiming that the Postal Regulations permitted only queen-bees: not drones or workers. The Union made an appeal to the Postmaster General, and as a result, got the law amended to read, "Queen-bees with necessary attendants."

Then the Postmaster at Suspension Bridge refused to receive queens for Canada by mail. An appeal by the Union resulted in an order to "let the bees pass!"

Then came the California bee and fruit suit, which cost our Union $384. The raisin-growers (at the close of the suit) admitted they were mistaken! The idea that fruit suffers because of the presence of bees, is *ridiculous!* The good they do in fertilizing the fruit bloom, far outweighs any possible evil that could follow from their presence!

Next came that "scientific pleasantry," in which the Union demanded a retraction by Dr. Kellogg, of Battle Creek, Mich., who, in his book, "Good Health," stated as did Prof. Wiley, that "bee-keepers were manufacturing comb from paraffine, filling it with glucose, and capping the same by machinery."

Mr. Darling, of Waterbury, Conn., was sued for $500 damages, and ordered to remove his bees from the city. As soon as his opponent discovered he was backed by the Union, he dismissed the case! This suit only costing $50 for the defense!

C. C. Richardson, of Tipton, Ind., was sued for keeping bees; declaring them to be a nuisance. He was defended by the Union, and the case was easily dismissed by the court.

The City Council of Fort Wayne, Ind., passed an ordinance against keeping bees within the city limits. Through the efforts of the Union, the law became only a dead letter!

The City of Arkadelphia, Ark., sued and ordered Z. A. Clark to remove his bees from the city within 30 days, and for a time he was in prison. The Union appealed the case to the State Supreme Court, and gained a grand victory!

The McCormick Bill, in Michigan, was intended to "wipe apiculture out of the State." The Union appointed Prof. Cook and Mr. Heddon to head it off; they made such a *buzzing* about it, that McCormick tabled his own motion, and let it die!

Then Mr. Olmsted sued S. W. Rich for $1,200 damages upon his person and property, by the bees. The jury (from which every person having bees was excluded) gave him but 6 cents to cover his wounded feelings and damages! So much for 1887.

I will not tire you by going over 1888, 1889 and 1890, but in conclusion will say, that in all attacks against the pursuit of bee-keepers, which the Union has deemed it expedient to vindicate, it has scored a victory—what no individual could have done single-handed!

It is strange that any bee-keeper should hesitate to become a member of the Union! It ought to have thousands of members, where now it has only about 450. If the Union is to continue its good work, it must be supported both by the financial as well as the moral influence of all apiarists of America. It only costs $1 per year to belong to it, and how dare you, my brother apiarists, to be without it?

Platteville, Wis.

SELECTIONS FROM OUR LETTER BOX

Poor Season for Honey.

This has been a poor season for honey in this part of Ohio. I started in the spring with 54 colonies, increased them by natural swarming to 92, and took about 850 pounds of honey in sections. I did not extract any, therefore my beee are all in good condition for winter, except 3 or 4, and those I am feeding. There is a splendid sward of white clover on the ground now for another year, if the winter is not too severe. I am a great friend of the BEE JOURNAL, and wish that every bee-keeper in the country would read it.

E. HENKLE.

Washington C. H., O., Oct. 15, 1890.

No Fall Honey Secured.

I commenced the season of 1890 with 28 colonies of bees, 2 of which were queenless. I increased them to 40 colonies, and obtained about 1,000 pounds of clover honey. There is no fall honey here. Cool, dry weather prevailed most of the time, but the bees have plenty of stores for winter.

JERRY SCOTT.

Clarinda, Iowa, Oct. 16, 1890.

Little Honey on the Market.

The honey season here is a complete failure, as far as surplus is concerned, and of honey there is little of any kind to be seen upon the market. The backward spring so weakened some colonies that they barely regained their strength, and gathered enough to winter. Strong colonies that were carefully fed and provided for in the spring, so they did not suffer, have gathered very little surplus. During such seasons I learn that it does not pay to have weak colonies, and I am strongly impressed with the idea of keeping no great number at one place, so that I hardly ever fail of *some* surplus, as I find that those in a small out-apiary have a little surplus, with scarcely more trouble than looking them over several times.

Marshville, O. CHRISTIAN WECKESSER.

Too Wet for Honey-Secretion.

The honey crop was very poor here this season. Most of the bee-keepers did not get any honey. I had only 400 pounds of comb honey from 36 colonies—all from basswood; and we had to feed for winter. My bees have usually obtained a good deal of golden-rod honey, but the rains cut off the crop this fall. There were quantities of flowers of both golden-rod and asters.

ASHER M. COE.

Coe Ridge, O., Oct. 13, 1890.

Bees and Golden-Rod.

Bees are busy humming on golden-rod here. I can smell it when visiting an apiary, and I often see them working on it in the fields. There are hundreds of acres of golden-rod in full bloom at Brocton, and the bees are busy on it all the time. No one here claims that bees eat grapes. One enthusiastic grape-grower keeps 20 colonies of bees, and another has 18 colonies. This is a grand country for grapes. There are 4,000 acres of grapes under cultivation here, and 10 carloads of grapes are being daily shipped. One man ships 2,000 baskets a week from 60 acres.

J. W. TEFFT.

Brocton, N. Y., Oct. 8, 1890.

Good Honey Crop.

Our honey crop is about an average; from 100 to 175 pounds of comb honey per colony, spring count. Our honey is so thick as to make it very difficult to extract.

WM. WILLIS.

Montrose, Colo., Oct. 11, 1890.

Half a Crop.

The bees did not do well in this section this season, owing to the wet and cloudy weather, both in the early and latter part of the honey season. Swarms and honey were only about half an average.

H. J. STREBY.

Spring Gap, W. Va., Oct. 7, 1890.

Fair Crop of Honey.

I got 40 pounds of extracted clover and linden honey per colony. I have not yet found time to take the fall honey off, but expect to have from 15 to 20 pounds each, from my 20 colonies.

D. E. ROBBINS.

Payson, Ills., Oct. 20, 1890.

Almost a Failure.

The honey season has closed here with almost a failure, as far as surplus is concerned. I secured about 700 pounds of extracted honey from 50 colones, but the bees are generally well supplied with stores for winter. Golden-rod saved us; without it we would have been compelled to feed the bees for winter stores.

L. G. PURVIS.

Forest City, Mo., Oct. 20, 1890.

Alsike for Honey.

My honey crop this year was a complete failure, with the exception of my Alsike clover, which, being pastured, has continued to bloom the entire season, and my 50 colonies of bees have gathered enough from the fall blossoms to winter them nicely.

BRUCE KNIGHT.

Utica, Mich., Oct. 20, 1890.

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

HONEY AND BEESWAX MARKET.

DENVER, Oct. 13.—We quote: 1-lbs., first grade, 16@18c. Ext, 7@8c. Beeswax, 20@25c

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.

M H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb. Southern, 70c per gallon.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water st.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 24.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 18.—The demand for extracted honey is good, with almost no dark on the market. We have bought the second carload of California honey, for which there is a good trade; but it will not fill the place of Southern honey with many manufacturers. Extracted honey brings 5½@8 cents a pound. There is no comb honey in our market.

Beeswax is in good demand at 24@26c., for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A New Home Treatment.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King Street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.

50E26t 1mly.

Some of Our Premiums.

Premiums are offered as pay for obtaining new subscribers, and will not be given to subscription agents or news-dealers. Each name to apply on a premium, must be accompanied by $1.00 for a year in advance, and all arrearages must be paid up, in addition to the above—only the advance subscription can apply on the premium. Write "*For Premiums*" on every list of names sent for them, if you do not order the premium at the same time, so that we can keep track of them. When ordering Premiums be sure to state how you want them sent, and enclose the postage, if they are to be mailed, unless we have marked them "post-paid."

Cash Premiums.—Those who prefer Cash Premiums to any articles offered, will please notice that 5 copies will be sent for $4.00, giving a dollar in cash for the trouble of getting up the Club; 10 copies for $7.50. These must all be sent at the same time, but after sending *one Club* of 5 and $4.00, the agent can send the next 5 subscriptions and the balance to make the $7.50 for the 10 names—and any additional names at the same rate may thereafter be sent. They need not be sent all to one post-office, and this applies to both of our Journals, counting two of the **Monthly** subscriptions the same as one for the **Weekly**.

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Your choice of either of the following Books will be sent post-paid for one *new* name with $1, for a years' subscription to either Journal:

Bee-Keepers' Convention Hand-Book.

It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with subjects for discussion. Price, 50 cents.

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"How To Be Your Own Lawyer" is the title of **an entirely new book** of over **500 pages**, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a **Farmer, Mechanic, Merchant**, or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will **save any man**, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, **$1.50**,) has to be paid but **once in a lifetime.** Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use, such as **Agreements, Bonds, Deeds, Leases, Notes, Mortgages, Wills**, etc. It takes up and treats in alphabetical order over **70** different subjects, a few only of which we have space to name below: **Arguments, Assignments, Auctions, Bankruptcy, Bills of Sale, Cattle and Dog Laws, Collection of Debts, Contracts, Deeds, Divorce, Dower, Executors, Farmers, Fences, Guardian and Ward, Highways, Hotels and Boarding-Houses, Husband and Wife, Interest, Landlord and Tenant, Leases, Letter-Writing, Libel, Slander, Lien Laws, Marriage, Mining Laws, Mortgages, Naturalization, Pensions, Parliamentary Rules, Partnership, Patents, Personal Property, Power of Attorney, Promissory Notes, Rights of Married Women, Schools, Subscription Papers** (How to Draw), **Trade-Marks, Trespass, Voters, Wills, Warranty of Horses.** There is also a very complete Dictionary of Legal Terms; Tables for the Computation of Interest; Measurements of LAND, LUMBER, LOGS, GRAIN; Legal Weight of a Bushel of Grain, Seed, and Roots; Quantity of Seed required to Plant an Acre; Table showing Paper required to make a Book of any size; U. S. Land Measure; Number of Brick required to construct any building; Presidential Vote from 1824 to 1885; Time for holding Elections in different States; Population of the U. S.; Prices of various Commodities for fifty-three years; Valuable Rules for the use of Farmers and Mechanics; and much other important information. A copy of this valuable work, handsomely bound in extra cloth, with ink side-stamp, will be mailed to any address on receipt of **$1.50.**

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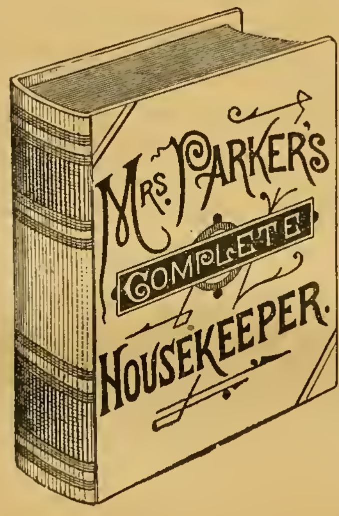

Of nearly **500** PAGES and a LARGE NUMBER OF ILLUSTRATIONS, *beautifully bound in extra cloth with ink side stamp and gold back.* It embodies the ripe experience of a veteran housekeeper, and its recipes (of which there are great numbers on all branches of cookery) can be relied upon as accurate and trustworthy. **BREAD.**—It tells how to make BREAD of all kinds, and gives numerous ways of preparing YEAST. Numerous recipes are given for making ROLLS, BISCUITS, CRUMPETS, SALLY LUNN, BUNS, CRACKERS, BATTER CAKES, CORN CAKES, MUFFINS, GEMS, WAFFLES, PUFFS, FRITTERS, MUSH, GRITS, etc. **SOUPS.**—It tells how to make 60 different kinds of SOUPS, including OX-TAIL, BOUILLON, MOCK TURTLE, TERRAPIN, CONSOMME, SPANISH, FRENCH, TOMATO, JULIENNE, etc. **MEATS.**—Clear and concise rules are given for BOILING, ROASTING, BAKING, BROILING and FRYING MEATS of all kinds. It gives the best method of CUTTING UP and CURING PORK, with an illustration and description of a SMOKE HOUSE. **POULTRY.**—It tells how to SELECT, KILL and DRESS POULTRY, and numerous ways of cooking the same are given, as well as for GAME. **SALADS.**—CHICKEN, HAM, OYSTER, FISH, etc., and how to prepare. **EGGS.**—Numerous ways of preparing Eggs are given, including OMELETS. **PICKLES.**—How to make CUCUMBERS, TOMATOES, WALNUTS, CABBAGE, CAULIFLOWER, etc. **CATSUPS.**—To make from TOMATOES, WALNUTS, CUCUMBERS, MUSHROOMS, etc. **CAKE MAKING.**—175 Recipes for making every conceivable kind of CAKE, from the Plainest to Wedding, with full directions for icing are given. **PUDDINGS, DUMPLINGS, ETC.**—119 different kinds of Puddings, Dumplings, etc., with numerous SAUCES for the same are given. **PASTRY.**—Directions are given for making 75 different kinds of PIES, including PLUM, PEACH, APPLE, LEMON, CUSTARD, CREAM, CHOCOLATE, PUMPKIN, MINCE, etc. **ICE CREAM and WATER ICES.**—35 recipes are given under this head, with full directions for preparing and making ICE CREAM and WATER ICES. **DYEING.**—It tells how to dye clothes successfully in a variety of colors and shades, with directions for CLEANING SOILED GARMENTS.

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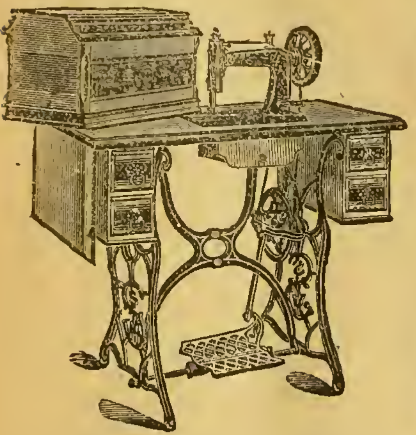

Each machine is THOROUGHLY TESTED to see that it is perfect before leaving the Factory, and the manufacturers GUARANTEE EACH MACHINE FOR FIVE YEARS.

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These attachments include one Johnson's Foot Ruffler, one set of Hemmers, one Tucker, one Foot Hemmer or Friller, one Package of Needles, six Bobbins, one Screw Driver, one Oil Can, extra Check Spring, one Gauge, one Gauge Screw, one Wrench, and an Instruction Book, which will enable one not accustomed to running a machine, to soon learn.

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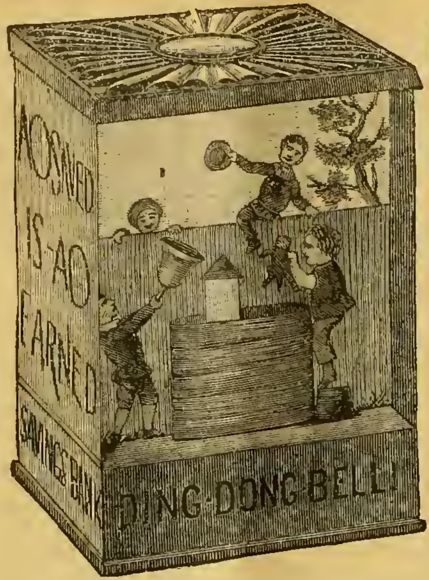

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DING-DONG-BELL

DING-DONG BELL BANK.

This Bank is made of sheet metal, and represents the well-known Nursery tale,

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And contains clock-work, main-spring, and Fan Regulator, so arranged that the instant a penny or nickel is pushed through the slot in the Bank, the clock-work causes the small boy to **Ring the Bell,** while **Johnnie Green** on the fence **Waves His Hat,** and at the same time

Jacky Stout Takes the Cat from the Well,

The whole performance lasting one-half minute.

A Bank That Will Earn Money,

Because the bottom part is a coin safe, into which the pennies drop after having started the performers. It has a metal door, with post-office lock and key, so all money put in is in safe keeping for its owner. It is **not** a single quick motion like that of the common trick banks, but is a very comical performance, lasting half a minute. It is excellent for use at fairs and other entertainments to catch pennies. Each bank is carefully packed in a wooden box, with full directions.

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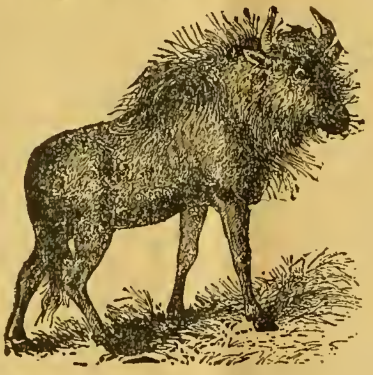

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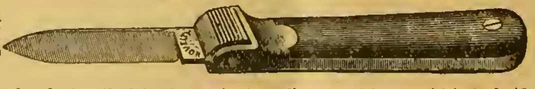
This is a nice 16-page Monthly with 150,000 subscribers—is in its 14th year, and one of the brightest and best Farm papers. It is published at Philadelphia, Pa., at 50 cents a year. We give it one year *free* for one *new* subscriber, with $1.00, or with a renewal for $1.20.

FARMER'S ACCOUNT BOOK.

It contains 166 pages, prnted on writing-paper, and is ruled and bound. Price, $3.00. We will club it and this JOURNAL for a year, for $2.00. It and both Journals for $2.50, less than the price of the book alone. If you want it sent by mail, add 20 cents for postage.

THE NOVELTY POCKET KNIFE



A plain, practical, common-sense and serviceable knife of this kind has long been needed by travellers, fishermen, hunters, mechanics, ladies, boys, and all who carry or use a pocket knife. It is operated entirely with one hand, is simple, safe and convenient, and is instantly opened or closed. A pull of the thumb, in the ordinary position in which the knife is held for use, upon the thumb piece, opens the blade slot, and drops out and securely locks the blade. The blade can also be set at various distances, for use as an eraser, pencil sharpener, nail cleaner, etc., etc., in which positions it is held by the pressure of the spring thumb-catch. By reversing the movement of opening, the blade drops back into the handle, and the blade slot is securely closed against entrance of dirt, etc., by the lip of the thumb-catch, which closes over and covers it. The frame of the knife is made of extra hard brass casting, the sides of ebony, the blade of excellent tool steel, and the whole is beautifully finished. Extra blades can be furnished if desired, and are easily inserted by any one. The knife is strong, durable, and well-made in all its parts. Length, when opened, 5 1-2 inches. Price, **50 cents** each.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Nov. 8, 1890. No. 45.

EDITORIAL BUZZINGS.

Autumnal glories all now may see,
Pleasures unbounded, joys on the lea ;
Nuts for the squirrel, sweets for the bee,
Surely Heaven means well toward me.

◆

The Convention Report occupies almost all our space this week, to the exclusion of other matter which had been "set up." It is the newest *news*, and will be anxiously looked for by our readers. Our remarks about the Convention are also crowded out. It was an enthusiastic meeting, and was attended much more numerously than we had expected. The Report will be given as fast as room is found for it.

◆

Mr. A. N. Draper, of Upper Alton, Ills., has placed sample of extracted honey on our desk, being the same as exhibited at the Convention at Keokuk. He puts it up in jars like the "Muth," containing from ½ to 2 pounds each. Also in 25 pound cans. The honey is thick, and of a nice quality.

◆

We Regret that our friend, Mr. W. Z. Hutchinson, the able editor of that interesting paper, the *Bee-Keepers' Review*, was absent from the International Convention. His recent illness, from which he has not yet fully recovered, made his absence compulsory. Though absent in body, he was "present in spirit," and his non-appearance was universally regretted. For several years he was the Secretary (and a good one, too), and his genial smile, hearty shake of the hand, and pleasant words, made him welcome to many hearts. We hope he will soon recover his usual health and strength.

To Move Bees a short distance is quite a simple matter, but Mr. J. Blain, of St. Catherines, Ont., wants us to answer the following question :

> Having sold my place, I want to move my bees about one-fourth of a mile. How and when should it be done to avoid loss?

It would be best to move them near spring, but they can be moved any time in the winter, after they have been confined to the hives for three or four weeks, for bees always mark their location anew before taking their first flight in the spring.

Fasten the frames either by putting down square sticks between the end-bars, or by fastening the top-bars with a brad, and the bottoms with a piece of notched wood. Tack wire-cloth over the entrances.

If you move your bees by wagon, put a wood rack on a lumber wagon, nail boards inside the stakes, and fill up the space about two feet with hay, and then place the hives on the hay, with the frames crossing the road-bed.

◆

Samples of Honey are received from John D. Adams, of Nira, Iowa—one being from white and the other from red clover. Both are of excellent quality, and have a nice "body." It is extracted honey, and it is put up in jelly cups.

◆

Canada sent two delegates to the International Convention—the Rev. W. F. Clarke and R. McKnight—two able delegates, as well as liberal-minded clever gentlemen.

◆

Prof. Cook's essay upon "The Requisites Necessary to Secure a Honey Crop," read at the International Convention was valuable and timely. We shall publish it next week, and bespeak for it a very careful perusal. We are sorry that the Professor was unable to be present. We missed him very much. His place cannot be filled by any other person, no matter how learned or profound. When he is not present at a National "gathering of the clan," there is truly "one vacant chair."

◆

The Agricultural Experiment Stations of the country, over fifty in number, issue annually some three hundred bulletins and reports of from four to two hundred and fifty pages each. Very few people have access to all of these publications, and fewer still can afford the time required to note the character and results of the experiments they describe. Those who find it desirable to keep pace with the progress of agricultural experimentation will find a condensed record of all station work in the Experiment Station Record, issued by the United States Department of Agriculture. The October number is being distributed, and the November number also is practically ready.

Queens Laying in the Fall.—Mr. C. A. Spencer, Farmersville, Mo., asks the following questions :

> I have 50 colonies of bees. I bought 15 colonies two years ago. I got 600 pounds of comb honey this year. The drouth here, this spring, weakened some of the young colonies until I had to feed them ; and not paying as much attention to them as I should have done, I found 2 of them out of honey. I united and fed them. Two colonies were full of moths, with plenty of honey, but few bees. I found no queen, young bees or eggs. I suppose they had lost their queen, so I looked at a number of young colonies, and I found all but two in the same condition. Do the queens stop laying in the fall and during cold weather? If so, at what time in the fall does she stop laying ? C. A. SPENCER.
> Farmersville, Mo., Oct. 20, 1890.

Mr. G. M. Doolittle answers this in these words : "In this locality queens generally stop laying from Sept. 15 to Oct. 1. That you found no brood in your hives on Oct. 20 is nothing strange ; but the part about the moths would be strange, especially if the bees were Italians. Have you not been allowing a lot of old combs to lie around until they have bred a large lot of these enemies of the bees, so that they now infest the populated hives ? If your colonies are too weak to winter well, unite them.

◆

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

◆

A Honey Cough Remedy Company of Brooklyn, N. Y., have procured 12,000 handsome exhibition hives, made of black walnut, and are placing them in drug stores to advertise their remedy. This news is sent by Mr. E. L. Pratt's father, who says that "it will greatly popularize honey." It is, no doubt, a novel way of advertising, and will probably add many shekels to the Company's income.

◆

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the BEE JOURNAL. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

◆

Clubs of 5 for $4.00 to any addresses. Ten for $7.50, if all are sent at one time.

CONVENTION DIRECTORY.

1891. *Time and place of meeting.*

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

GLEAMS OF NEWS.

Uniting Colonies in the fall is thus practiced by a correspondent with excellent success. He says:

If I had 4 small colonies that wished to unite, I would move them together, and let them get well established in their new location before disturbing them. I would move them in the evening, after all the workers had returned from the fields, and and put grass or straw in front of the hive entrance, so that they could not leave as usual; a board in front, to bump their heads against, will cause them to notice a change in their location, and take their bearings.

When established in their new home, I would remove all their queens but one, and cage them, choosing the best one to remain with the colony.

When wanted to unite them, I would remove the hives from their old stand, and place a new hive in the center of the place where they stood, placing a smooth board in front of it to brush the bees upon. Then I would remove the frames containing brood from all the hives, brush off all the bees, and put the frames promiscuously into the new hive, and pour all the bees together in front of it, and drive the bees into it with smoke.

As neither of the colonies can lay claim to this home, they accept the conditions, and unite peaceably.

The frames containing empty comb I would store in a safe place for another season's use, and of those containing honey I would uncap a few at a time and place them in the second story with a small aperature in the covering, over the frames of the lower story, to permit the bees to come up and carry the honey below.

When the combs were all clean, dry and empty, I would store them away and fill their place with more. The honey that the four small colonies had, may be sufficient for the united colony, which will be strong in bees, and be able another season to pay for the labor of uniting.

If they had been left alone all the owner would have had in the spring would have been hives with empty comb, the honey all being gone, and dead bees for the compost heap.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 751 of this paper.

A Trial Trip subscriber is so well pleased with the BEE JOURNAL that he wrote us as follows:

I have received three numbers of the BEE JOURNAL through the kindness of some one, and I am so much pleased with it that I cannot longer withhold my subscription to such a valuable paper. I therefore enclose a dollar to pay from now until December 1891, as you so kindly offer.

I also enclose 35 cents more to make the club rate for it and the ILLUSTRATED HOME JOURNAL, for the same time, a sample of which I have also received, and have read with more than ordinary interest.

With these two valuable JOURNALS I shall be well supplied for the coming year. It is a marvel to me how you can publish them for such a very small sum.

WM. T. JOHNSON.

This is a sample of quite a number of similar communications we have received. We are glad of the generous response to our *present* of four weekly issues of the BEE JOURNAL. We shall try to make full value for the money sent us for both Journals for the coming year.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50. ..	1 40
Bee-Keepers' Review........	1 50....	1 40
The Apiculturist............	1 75....	1 65
Bee-Keepers' Advance	1 50....	1 40
Canadian Bee Journal.......	2 00 ...	1 80
The 7 above-named papers	5 25....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25....	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
Weekly Inter-Ocean.........	2 00....	1 75
Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75
Orange Judd Farmer.......	2 00 ...	1 65
Farm, Field and Stockman..	2 00....	1 65
Prairie Farmer..............	2 00....	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

QUERIES & REPLIES.

The Influence of Drones on Swarming.

Written for the American Bee Journal

QUERY 737.—Do bees ever cast a swarm before they have drones in spring?—R. W.

No.—M. MAHIN.

No.—A. B. MASON.

I do not know.—R. L. TAYLOR.

I think not, unless starved out.—C. H. DIBBERN.

I have never known them to do so.—MRS. L. HARRISON.

Yes, but not often, if in a normal condition.—H. D. CUTTING.

No, unless it should be a forced swarm.—J. M. HAMBAUGH.

Certainly, not often. I do not know whether they ever do.—C. C. MILLER.

I think they do, although it is not usual.—G. L. TINKER.

I never knew them to do so, but think they might do such a thing.—G. M. DOOLITTLE.

I never knew them to do so. Others may have had different experience.—J. E. POND.

Not usually; but drones are not a necessary condition of swarming, though they are there, as a rule.—DADANT & SON.

I do not know. I never had swarms till after I had seen drones in the apiary.—EUGENE SECOR.

Not a natural swarm. If they swarm before there are drones, it is from starvation, or some abnormal causes.—P. L. VIALLON.

If it is a natural swarm uninfluenced by any extraneous pressure, it always has drones hatched, or in a good stage of development. Abnormal swarms pay no attention to drones being present.—J. P. H. BROWN.

I have never known such a case. If drones were all kept out by artificial pruning of the comb, I think they would get swarms just the same.—A. J. COOK.

Certainly; we have lots of colonies that never have a drone; not a bit of drone-comb in the hive; not a cell, and never a drone seen flying around the hive; and these colonies swarm like others—JAMES HEDDON.

O, yes. The presence of drones does not regulate swarming. I have quite a number of colonies every season that have their brood-combs so solid with worker-cells that I never see drones pass in or out of the hive. Yet these colonies swarm just like other colonies do, that are allowed to rear drones. Bees seem to instinctively understand that there are drones in their season, whether they are present in the hive or not.—G. W. DEMAREE.

Abnormal swarms occur whether the colony have drones or not. If drones are not in the hive from which a swarm issues, the bees seem to know that they come regularly in their season, and are in existence, and will fertilize the new queen, even if there are none in that particular hive.—THE EDITOR.

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity of clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

INTERNATIONAL.

Report of the Business, Speeches and Discussions.

Written for the American Bee Journal

The twenty-first annual convention of the International American Bee-Association was convened in Grand Army Hall, Keokuk, Iowa, on Oct. 29, 1890, at 10:30 a.m.

Hon. R. L. Taylor, of Lapeer, Mich., President of the Association, called the Convention to order, and C. P. Dadant of Hamilton, Ills., occupied the Secretary's desk.

Dr. C. C. Miller, of Marengo, Ills., formally opened the morning session with an invocation of the divine blessing, after which occurred the reception of new members, and the payment of dues.

Then followed the Address of Welcome by

MAYOR JOHN E. CRAIG,

who said he was not present to deliver a formal address, but as the chief executive officer of the city, to extend a cordial welcome to the Convention and the delegates composing it. He welcomed the Canadian friends as heartily as the American citizens. Americans exhibited a cardinal pride in referring to the grandeur and greatness of this country, whenever an opportunity offered.

Mr. Craig then alluded to the scenery in the heart of the Republic, and said it equalled that of Swizerland. He promised that the people of Keokuk would be found hospitable, and that they would courteously try to make it pleasant for all while here. He thought that it was the part of wisdom to hold this International Convention west of the Mississippi river, as it would widen the field of labor, and would direct attention anew to the bee-industry.

Mr. Craig concluded by saying that there was nothing so laborious as the bee, which was an illustration of God's handiwork that is followed by the American people, and especially those of Keokuk.

The response to the address of Welcome by the Mayor was, by request of the President, made by Mr. Thomas G. Newman, who said:

Mr. President, Ladies and Gentlemen:

On behalf of the International American Bee-Association I would say that we accept the welcome so cordially made to us by Mayor Craig. We can well afford to plant ourselves in this fair city, and indulge in a substantial time of enjoyment for the next three days. The two great Saints of the Calendar sits one at the North and the other at the South of this city, and this is "the Gate City"—the gate between these Saints—St. Louis and St. Paul. It is also one of the gates to the great West, with its blooming fields and its treasures of hidden wealth, as well as to the vast honey fields of Colorado and California. Now, as representatives of the industry of apiculture, from the Atlantic to the Pacific Oceans, and from Hudson Bay to the Gulf of Mexico, we are met here to discuss the present status and the future prospects of the pursuit, and with much pleasure we witness the cordial welcome of this beautiful city to its visitors, and wish for it a glorious future.

The President announced, as the first topic on the programme, "Fifty Years' Progress in Apiculture," and called upon Mr. Thomas G. Newman to address the Convention on that subject, which he did, as follows:

Fifty Years' Progress in Apiculture.

Of the Grecian poet, Pinder, it is said that the Muses were very shy with him until a honey-bee alighted upon his lips; after that, his soul was filled with the most beautiful thoughts, and his voice poured forth the sweetest of poetry.

In order to give the merest outline of the subject assigned to me, and make that "simple history" interesting to you, I fear I shall need not only the bee to touch my tongue, but must have the Muse herself to plant a rapturous kiss upon my lips, for we learn that in Greek Mythology, the Muse was "one of the nine goddesses who presided over poetry, painting, music, rhetoric, and the liberal arts in general"—then I may speak words which may interest you.

In order to be able to determine what has been the progress of Bee-Keeping during the past 50 years, it will be necessary to ascertain where the ancients left it, at the date mentioned for my comparison to be made.

In "the misty ages of the past," superstition held sway over everything, and the bees were not exempt. The ancients saw Apiculture only in its crude state. They had seen its great possibilities, as it were, only "through a glass, darkly."

In the time of Abraham and Samson, they had this "treasure in earthen vessels"—and, in fact, in Palestine and the East, to-day, they still keep their bees "in earthen vessels!"

Greek and Roman Sages and Poets caught only a glimpse of apicultural possibilities, and then the World was enveloped in the gloom of "the dark ages!" Then ignorance and superstition reigned supreme until the days of Huber and Bevan, of Dzierzon and Berlepsch, who cleared away much of the rubbish, letting the daylight in upon the pursuit. That is just where we find apiculture 50 years ago—plodding in the darkness, but with a small light ahead; it was but a dim, tallow rushlight, we grant you, which then shone—when compared with the refulgent rays of the bright orb which now shines upon the science of Apiculture, in the closing years of the 19th century.

As all the "wants" were felt, they were fully supplied.

IMPROVED HIVES.

The first apicultural "want" in America was a simple and practical hive—and just then Nature produced that intellectual giant, whose name is ever honored by Americans—the Rev. L. L. Langstroth—and he gave us the hive that had long been needed, with its movable-frames and surplus receptacles—revealing the mysteries of the bee-economy, revolutionizing the methods before practiced, and sending old theories to oblivion!

IMPROVED BEES.

A better race of bees was also needed, and Nature again produced "the men for the times," who supplanted the native black bees with the yellow race. Here a brief history will be in point:

In 1853, Alpine bees were introduced into Germany. Madame de Padua, of Mira, Italy, wrote to the Rev. Dr. Dzierzon, who resided in Lower Silesia, for a model of his bee-hive, and she sent him a colony of the yellow bees, which were the first seen in that part of Europe.

In 1856, Mr. Samuel Wagner, then of York, Pa., attempted to import a few colonies of Italian bees, but they all perished on the voyage. In 1860, Messrs. Wagner, Langstroth and Colvin succeeded in importing the yellow bees, from Dr. Dzierzon's apiary.

In 1859, Messrs. S. B. Parsons, of New York, and P. J. Mahan, of Pennsylvania, were the first to land Italian bees in North America.

Then importers grew in numbers, and queen-bees from Italy, Cyprus, Carniola, Syria and Palestine followed in rapid succession, and Messrs. D. A. Jones and Frank Benton searched all over the Eastern Hemisphere for other races of bees, in order to improve our stock and produce our ideal bee—*Apis Americana*, which, by a liberal translation, means "the Bee of America." By careful selection and breeding for some years, many have now produced their *ideal bee*, and I am free to say that now *Apis Americana* is here in all its glory!

In deciding upon the merits of *our ideal* bee, five points are essential, and may be enumerated thus:

The queen must be *prolific* in order to have the hive full of bees at the proper time to gather the harvest of honey.

The bees must be *industrious*, to let nothing escape their vigorous search while gathering the nectar.

They must be *docile*, to allow the apiarist to manipulate them and the hive with ease, in order to be profitable.

They must be *hardy*, to endure the rapid changes in this very trying climate.

They must be *beautiful*, in order to secure the admiration of the fanciers of fine stock.

These five points are all essential characteristics of *Apis Americana!* "Our ideal bee" will be present at the very moment when the slumbering flower, under the penetrating dew, awakes to consciousness, and unfolds its buds to take in the first rays of the morning sun! It will welcome "Old Sol" at the very break of day; dip into that tiny fountain which distils the honey, drop by drop, and bear away the sweet treasure to its cells of wax, in its populous little home.

BENEFITS OF IMPROVED BEES.

To reap the full benefit of the imported bees, it became necessary to be able to find an easy and safe method of changing the natives to the improved variety—to rear and ship "our ideal bees," and spread them over the whole continent. Then as if by magic these methods were discovered and put into practice, as well as to increase by "the division of colonies," instead of by swarming—and to control the fertilization of queens, so as to assist in the "breeding for good points." and the elimination of the undesirable traits of character.

LITERATURE.

Until then, but little thought had been devoted in this country to bee-keeping as an occupation, and still less to it as a science. True, many kept a greater or less number of "gums" or "skeps," and a few (comparatively a very few) master minds had conceived any rational scientific views regarding many of the mysteries of the bee-hive; some did to an extent comprehend the physiological history of the honey-bee, but they were so very few that their wisdom was almost covered with disrepute by the ignorant and superstitious ideas of the masses, who kept bees as did their great-grandfathers, and whose comprehension had only kept pace with their improvements.

The master-works of our Father Langstroth and the late M. Quinby gave rise to much thought and study, which in turn led to experiments, and these created the necessity for a periodical, in the columns of which new discoveries could be heralded, accepted theories be discussed, old prejudices be combatted, and Apiculture be elevated to its proper position among the progressive sciences.

In 1861, the AMERICAN BEE JOURNAL was started by the late Samuel Wagner. The Rev. W. F. Clarke ably edited and managed the JOURNAL for about a year—and in 1873, it became the property of the present editor. That much progress has been made during the 30 years of the AMERICAN BEE JOURNAL'S existence, all will acknowledge. Many doubtful problems have been solved, and new ideas promulgated; all the standard works on apiculture have been revised, over and over again; and published experiences have proven to the several authors that their books inclined to error, and none but the most conceited have assumed that they know it all.

Many other excellent apicultural periodicals are now published, and there is a host of good books for bee-keepers, but time would fail me to mention them all, or in the few moments allowed me, to do justice to their excellence. One thing is certain, however, that the progress and intelligence displayed in the pursuit of bee-keeping, shows that much is due to the liberal use of "printer's ink" in the excellent periodicals and books devoted this pursuit—

> For printer's ink has built its throne
> Where minds their tributes bring,
> And God's most gifted intellects
> Shout "printer's ink is king!"
>
> In every clime, in coming years,
> Will men proud anthems sing,
> And round the world the echoes float,
> That printer's ink is king!

BEE-CONVENTIONS.

Perhaps nothing has been more potent in developing the best thoughts, the most practical methods, and the advanced ideas of those devoted to our industry, than the congregating together of apiarists in County, District, State and National Assemblies to consult and advise about every advancing step in apicultural progress.

BEE AND HONEY SHOWS.

Grand exhibits of bees and honey at the various Agricultural Fairs all over the country, have done much to inform the masses about honey and its uses, and, by good-natured rivalry, have raised the standard of excellence, and enhanced commercial values.

HONEY FLORA.

By planting for honey-bloom, and providing continuous pastures for the bees, from early in the spring until late in the fall, more honey will be produced, and bee-keepers will become general benefactors—

> For generous bloom in all the dales,
> And mountain sides will grow;
> And rocks and hills, and brooks and vales,
> With milk and honey flow.

EXTRACTING HONEY FROM THE COMB.

The old way of mashing pieces of comb taken from the breeding apartment of the hive, and "straining" out the honey from the bee-bread, dead brood, etc., was so very undesirable that a new method was demanded. Centrifugal force applied to the combs furnished the desired process.

Major Hruschka's little boy, with a tin pail, containing a piece of honey which he swung around for fun, gave to the world the honey extractor. The Major noticed that on the further side of that honey-comb, the honey was gone. He turned the pieces of comb over, and told the boy to swing the pail again; and then the comb was empty.

That little circumstance was the father of the honey extractor, which is now so universally used to take the honey out of the comb—giving honey, minus the wax, as the choicest food for man—and returning the combs, minus the honey, to be refilled by the bees, without waiting for new comb to be built—saving much valuable time for the bees, and tons of honey to the producer.

A peculiar knife for uncapping the combs before placing them into the extractor was an absolute necessity. An edge like a razor was needed to cleanly cut off the cappings, and leave the combs intact, ready for immediate refilling.—The steel uncapping-knife was then produced, with a beveled edge, a sharp point, and as keen as a razor, in just the nick of time to completely fill that *want!*

THE BELLOWS-SMOKER.

To control the bees while manipulating the hives, and prevent them from stinging, was greatly desired—and that "control" was bestowed on mankind by the invention of the bellows smoker, just when it was needed the most.

COMB FOUNDATION.

Left to "their own sweet will," the bees will build drone-comb and produce multitudes of drones—"consumers of honey." Some way to prevent this was much desired, and was found in the invention of sheets of wax with corrugations on either side, which the bees readily accept, build out into worker-cells, and fill them with honey or eggs as required — preventing the undesirable excess of drones, and greatly increasing the amount of surplus honey.

Stronger combs were needed for the safe transportation of honey in the comb, and the timely invention of *thin* comb-foundation fully supplied that want.

SMALL PACKAGES FOR HONEY.

To cut out comb, filled with honey, from the breeding apartment, was undesirable because of its leaking—and the invention of the small sections for comb honey came to the rescue, by giving the purest virgin comb for table use, a clean and marketable package, filled with heaven-distilled nectar, valuable alike for food and medicine, and enticing, by its neatness and simplicity, consumers of the sweet product.

Jars, cans, kegs, etc., serve the same purpose for honey out of the comb—and add to the commercial value by placing it within the reach of all consumers.

CONCLUSIONS.

So much has been accomplished in the past 50 years; but we are by no means satisfied with "present attainments"—we shall "press onward," for the grand possibilities of the future have as yet hardly dawned upon us. New inventions are just beyond our ken; grander truths will soon be unfolded; and the loftier altitudes will yet be reached!

> "Where in the realm of Nature do we see
> A worthier study than the honey-bee?
> What curious instinct dictates every art,
> Whereby the little creature acts its part?
> How do the marvels of the hive combine,
> All other insect wonders to outshine?"

America, the brightest gem in the diadem of the World, is the Mother of the grandest Apicultural inventions, and has perfected and put to practical use some of those which were simply conceived in other lands, but then left in an undeveloped state.

Already she produces the most delicious honey from her myriads of nectar-bearing flowers! She has shown to the world the finest bees, carefully bred for business as well as for beauty! And in modern methods, practical management, available tools and implements, and the perfection of supplies and fixtures—she now leads the World.

THOMAS G. NEWMAN.

Dr. C. C. Miller remarked that he was reminded of the time when he first began to keep bees. He caught a swarm on the 4th of July, years ago, put them into a barrel, and saw chips at the bottom, and wondered what they were. He was surprised to learn afterwards that it was the cappings gnawed off by the bees.

Remarks were also made, and some questions asked by Dr. Oren, Rev. W. F. Clarke and others.

Mr. Newman, by request, replied to all in a happy vein.

Several then spoke of the "beauty" in bees, and agreed with Mr. Newman, that the best bees were those that were "bred for business as well as for beauty."

Mr. McKnight said there ought to be some standard for excellence. He believed in beauty and utility combined. The beauty of a bull-dog is real ugliness! The points at Competitive Shows were all stated as to horses, cattle, poultry, dogs, etc., and it ought to be also stated for bees! These should be competitive points. He said that the address of Mr. Newman, just listened to, was measurably above criticism, but he would like the points mentioned to be settled by some body authorized to do so. The beauty of a bee was in its temper. If it could be handled and manipulated without receiving stings, it would be put down as *good* in that respect.

In reference to the Mayor's address of Welcome, he desired to thank him for his kind references to Canada and its representatives present. The United States had been represented as a wooer, and Canada as the coy, bashful damsel. But there would be no marriage of the two—for her mamma would object. She must say, in characteristic language, to her admirer—"I will be a sister to you," and that is all. Canada had a model government. She was a Republic all but in name; and as Democratic and Republican as any one could wish. All that the Mother Country did was to appoint the Governor General. Canada paid her salary, as well as all the salaries of all her officers in all departments. She literally governs herself.

QUESTIONS.

Can an apiary by Italianized by daubing a young queen with honey and then dropping her into a colony just after a swarm has issued?

After some discussion it was said that a virgin queen was intended by the one who asked the question. Then all agreed that a colony could not be Italianized by a *virgin* queen.

S. A. Shuck, of Liverpool, Ills., said if honey was coming in freely, fertile queens, put in the hive in that way, would be accepted in ninety-nine cases out of one hundred.

President Taylor said that there was no necessity of daubing her with honey.

A. N. Draper, of Upper Alton, Ills., bought black bees and Italianized them by letting Italian queens run in at the entrance, when honey was being gathered rapidly.

A. I. Root said he was the one who had advocated introducing queens in that way. Queens an hour old could run in anywhere—but few are lost. The will be unmolested 'till they come to lay, then they settle it, and decide which shall remain.

A question was asked as to the size of a bee-cellar, to have the best results.

Dr. Miller prefers a large cellar: he believes in a plenty of room. But too large a cellar would not pay; yet there should be room enough so that the hives would not crowd too much. The depth underground should be about 8 feet. The entrance should be on the side where the general prevailing winds would not come. If on a side hill, let the entrance be where you can walk in on the level. It should have double doors.

R. L. Taylor said the sun would penetrate through doors more readily than through the sides of the building, and the door therefore should not be where the sun would shine upon it very long. The north or east would be preferable, and avoid the sun.

A. I. Root said a large body of air is preferable to a sudden change in the temperature.

Dr. Miller said he wanted good air for the bees.

A. N. Draper asked: If air is easily vitiated, why do bees winter well when they are buried in clamps?

W. F. Clarke said that the best size is all out-doors, and 50 miles high.

Dr. Mason said his cellar was 14x22 feet, and he there winters 50 colonies satisfactorily. Pure air is more needed in early spring than in winter, as that is the most dangerous time.

S. A. Shuck said that four years ago he wintered 130 colonies in a cellar 18x32 feet, but the air was very much vitiated, so that a lamp would not burn in it, nor matches ignite. He opened the door for awhile, and then the air was all right; but he could not see that the bees had suffered any damage.

C. P. Dadant could not believe that bees would live in such air as would extinguish a lamp.

S. A. Shuck replied that while the air was so bad that the lamp would not burn, the bees were all right.

Dr. Jesse Oren, of La Porte, Iowa, had wintered 230 colonies successfully in a cellar 16x28 feet, and 8 feet high. He had used it for 20 years.

The Convention adjourned until 2:00 o'clock p.m.

AFTERNOON SESSION.

President Taylor called the Convention to order at 1:30 p.m.

The following resolution was presented by Thomas G. Newman, and adopted:

Resolved, That we appoint Prof. A. J. Cook a committee of one, to use his best endeavors to secure an appropriation from the general government—out of the $5,000 that can be used for the aid of apiculture—to be used in securing the best bees to be found in the Orient, or elsewhere, for the purpose of experiment—looking for a still greater improvement in the good bees we now have.

Question: "In doubling up colonies, would you save both queens?"

B. Taylor answered, No. He would have no use for the extra queen after doubling up two weak colonies. He had wintered two weak colonies by using a queen-excluding honey-board, and he thought that weak colonies could be wintered better in that way than by uniting them. He had wintered half a dozen weak colonies in that way, last winter, with clusters 3 or 4 inches apart. If the clusters should touch, they would unite.

A. I. Root said that this was his hobby years ago, to winter two queens in a hive. He first tried tin between the clusters, and lost them; then he used wire-cloth, wood, etc., between the clusters, and the wood worked best.

Dr. Miller said he had wintered two queens in one hive, with from two to four quarts of bees in each, with a ⅜-inch board between the clusters. He had tried it and given it up. He could always winter weak colonies in that way.

B. Taylor gave a separate entrance to each colony.

A. E. Ault, of North Liberty, Iowa, wants strong colonies in the spring, and uses a ⅞-inch division-board, and crowds the bees on what combs they can cover, and they wintered well.

Dr. Miller said that the weak colonies will winter better in that way than separately, and will build up in the spring as fast as if they were single colonies.

Question; "Will a colony of bees winter without sealed honey?"

Dr. Mason said that it would, but he would rather not risk it very often. It would winter better in a dry, than in a damp season. In a dry cellar it would be the same.

R. McKnight asked, Is not unsealed honey unhealthy for bees?

Dr. Miller said that unsealed honey will sour much more readily than when it is sealed. He preferred it sealed.

R. B. Leahy said that he had experimented with feeding unsealed sugar syrup. He had wintered 50 colonies successfully in a wet cellar.

J. C. Stewart, of Hopkins, Mo., wintered bees in chaff hives two years ago on sugar syrup, and they did well. They had 15 to 20 pounds fed to each, beginning on Dec. 6; those fed first. lived, and those fed later all died. These stores were unsealed, and the bees were out-of-doors.

Dr. Miller asked what amount of sugar syrup and honey was consumed.

President Taylor said that when the stores were sugar syrup the consumption was much less. Those fed with honey, consumed 22 pounds; while those fed on sugar syrup consumed from 3 to 7 pounds.

W. J. Finch asked whether the strength of the colonies would not account for the difference? and whether those fed with honey did not come out stronger?

President Taylor thought not, as they seemed of equal strength. All were destitute of brood in the spring. Those fed with sugar syrup had more vitality in the spring. Honey is stimulative, and more is used.

R. McKnight said that the amount of brood-rearing makes an enormous difference, as the weight of brood is of great importance, and the weight of the hives does not show the amount of consumption. It is therefore not an accurate test.

President Taylor said that bees without brood would present a good test. Taking the average of testimony, the sugar syrup will go further.

A. I. Root said that he could not advise the use of cheap honey for feeding bees, as there was danger of its being tainted with foul brood. He would not take away sealed honey and feed sugar syrup.

S. A. Shuck asked if bees that consume less will do as well in the spring as those that consume more.

President Taylor always expected and found better progress in the colonies wintered on sugar stores. Honey is stimulating, and not so powerful for food, but makes the bees active—stirs them up. Sugar syrup is what is wanted for winter—good food keeps them quiet.

A. I. Root said sugar is sweeter than honey.

Chas. Dadant said the best sugar should be used.

Mrs. Harrison asked: Is there any difference in the sugar from cane and that from beets?

A. I. Root said that pure sugar was the same from each source.

C. P. Dadant said that the beet sugar used in Europe was just as good as any cane sugar.

Dr. Miller—All must agree that we must feed granulated sugar if we have to feed, whether the sugar comes from cane or beets.

Eugene Secor said that Orange Judd, in his last paper, asserted that sugar from cane and beets is precisely the same. He had just returned from the large beet-sugar factory at Grand Island, Nebr.

Dr. Mason—Get the granulated sugar, and do not trouble about the scientific part.

President Taylor said that if a man has the time, and is willing, it will pay to extract the honey, and feed sugar syrup, but for himself he did not like the business of extracting and feeding.

C. P. Dadant said that he did not believe it paid to do it at all.

J. C. Stewart said that it would not pay, for the honey extracted is a 3rd or 4th class article, and not marketable.

R. McKnight said that it would not do, no matter whether it paid or not, to encourage the practice of extracting honey for the purpose of feeding sugar-syrup.

W. F. Clarke said that the bee-keeper should not needlessly feed sugar syrup to his bees, and run the risk of some of it going to his customers. An undisturbed brood-nest, stored with the best honey, is what he wants.

Apicultural Journalism was the next subject, and the following by W. Z. Hutchinson was read by Dr. Miller:

Apicultural Journalism.

Bee-keepers have good reasons for being proud of their literature. Scarcely a point arises upon which we cannot find the recorded experience of our best apiarists; while new discoveries are at once described, illustrated and discussed in the bee-keeping periodicals. Perhaps bee-keepers have given the matter little thought, but, notwithstanding the excellence of these periodicals, might they not be improved? If so, how? Have they faults? If so, what are they? We believe that "apicultural journalism" may be profitably made the subject of special discussion.

Time was when many of the industries were represented in one family. Flax and wool were grown, spun and worked up into cloth, and made into clothing. Cows were kept, and cheese as well as butter made for home use. Poultry and a few colonies of bees added to the comforts of the household. But there is no need of going into detail; every one knows how people lived 100 years ago. Cheap and rapid transportation has encouraged the invention of machinery, the building of factories, and the classification of labor. This has brought about *specialty*. With specialty in production came the need of specialty in periodicals devoted to the interests of producers. For the general farmer we had and still have, agricultural journals devoted to the cultivation of grain, stock-raising, gardening, fruit growing, bees, poultry, etc., and they answer their purpose well, but when a man makes a specialty of some one of these branches of rural industry, he then wishes a periodical devoted to that business as a *specialty*, not one mixed up with some other specialty for which he cares little or nothing.

These other topics are all right in their places, but bee-keepers who do not care for them, dislike to *pay* for their discussion, or to wade through the discussions in order to get at what information there is about bees. As a rule, bee-periodicals that attempt to "mix in" other topics, do so at a loss. We believe that they will best serve the interests of their subscribers, and at the same time secure their own prosperity, by letting severely alone all subjects not pertaining to their specialty. We would not expunge any wit, humor or eloquence that may bubble up spontaneously, but the publication of such *attempts* at wit as have appeared in some, is enough to kill any journal that it is possible to kill.

After having decided that only such matter as pertains to bees shall go into the journal, then the matter of *quality* must be looked after. Some matter that appears in some of the bee-papers could be placed only under the head of "twaddle." What does possess editors to publish such trash? A woman tells in a would-be-funny way of her troubles in clipping a queen's wing, or a man starts out with: "I am a bee-keeper. I began the season with 24 colonies. Some were weak, but—" What is the use of going any further? You have all seen these things in the periodicals. What good are they? Do they help bee-keepers? *Must* such things be used, in order to fill the pages? No; not if editors will bestir themselves, and, if they cannot do this, they are unfit for the positions they occupy.

Friends, how do you read the bee-papers? *We* read them in this manner. We glance at the heading of an article, then at its author's name, and sometimes this is all we do. By the way, we wish all would place the author's name at the head of the article. It saves the bother of looking up the end of the article (over the leaf, perhaps) to see who wrote it. Perhaps some think that the knowledge of the authorship is immateial; if the article is good, it is good irrespective of who wrote it. True, but show us the man who does not wish to know who is doing the talking.

To return, if the heading and authorship are favorable, the first paragraph is glanced over. (Do you know that the gist of a paragraph can be taken in at a glance?) Then the next paragraph is given a glance, then the next, and so on through the article. Frequently this is all the reading the article receives.

There are some copies of some of the bee-papers that we have read through in this manner in about five minutes. About once a month there comes to this office a paper claiming to be a bee-paper, that we *don't read at all*—it simply is not worth it.

When we learn, by glancing through an article, that it contains something of value, we then read it through carefully.

Careful and efficient editing would save all this sifting on the part of readers. The question that each editor ought to ask himself, when deciding upon what shall appear upon the pages of his journal is, will the matter admitted be of real benefit to the readers? If it will not, why publish it? It may not be possible nor advisable to adhere strictly to this rule, but it ought to be always kept in view.

We wish to oppose one idea that some of our editorial brethren have, with much labor, tried to pound into the heads of their correspondents, and that is that they must write short articles in order that *all may be heard from*. Why should "all" be heard from, unless they have something of value to communicate? Of course, we prefer to have ideas expressed in the fewest words possible, but a long article is just as welcome as a short one, provided it contains valuable information in proportion to its length. The idea is just here. A journal ought to be filled with the most valuable information that can possibly be packed into it, irrespective of whether that information is furnished by two or three correspondents, or by a dozen.

[This being an editorial written for the "Review" for November, such paragraphs as were simply "personal chats" with its subscribers, and as such unsuitable for discussion at a Convention, are, of course, omitted here.]

We think that, as much as possible, advertisements ought to pertain to bee-culture. But few others should be admitted, and they should be strictly first-class. Perhaps some will say that this is a matter that concerns the publisher alone. Possibly. But where is the advertiser of apiarian goods that likes to have his advertisement buried among those of guns, buggies, watches, sewing machines, lamps, books, tobacco, trusses, patent medicines, corn remedies, pile remedies, etc.? We believe that the admission of such trash into the advertising columns of a bee-paper displeases the bee-keeping advertisers, that it is an actual detriment to them, and that it lowers the journal in the estimation of its readers. Let us keep our advertising columns pure and clean, and as nearly apiarian as possible.

In closing, please allow us to quote from Allan Forman, editor of *The Journalist*. In the August issue he said: "The handsome paper is the successful paper of the future. Readers and advertisers are being influenced more and more by the appearance of the paper, its typographical attractiveness, and the taste displayed in the make-up. A tasteful and pleasing appearance is accepted as the visible and outward evidence of financial prosperity. People who could not make-up a paper, and who do not know one type from another, are quick to discriminate against the slovenly sheet, in favor of the neat and handsome one."

Upon this subject we shall be glad to hear not only from our regular correspondents, but from our editorial brethren as well; and if the faults of the *Review* are most clearly brought to light in the discussion that follows, no one will be more pleased than

W. Z. HUTCHINSON.

Dr. Miller said that Mr. Hutchinson had some good ideas, but he could not endorse all that are advanced in the essay. He did not believe that all other advertisers than apiarists should be excluded. We want buggies and other useful things, and there is no reason in excluding any useful article from the advertising columns of our apicultural periodicals. Advertisements help to support the periodical, and I am glad to see all clean advertisements in our bee-papers.

Thomas G. Newman said that advertisements of useful articles are the life of the periodical, and a bee-paper cannot be supported without them. There are not enough to come from apiarists alone, to support a good periodical, and all should welcome such as a help in supporting our bee-papers.

Dr. Mason said he wanted a good periodical, and did not object to the advertisements if they could be taken off when binding the volume. With the *Review* this was impossible, as the first few pages were all reading matter, and the last ones, on the corresponding leaves, were advertising, and these could not be taken off. The *Review* is a good paper, but is not what its name implies—a review. The AMERICAN BEE JOURNAL is what its name implies—the bee-periodical of America. *Gleanings* is what its name implies—gleanings in bee-culture; but the *Review* is a topical paper—not a review at all.

S. A. Shuck said we need buggies and agricultural tools, and he made no objections to advertisements of useful articles in our bee-periodicals.

W. F. Clarke said that good apicultural literature costs something. You cannot have first-class literature without paying well for it. Some cheap, new papers are offered at 25 cents a year, and are dear at that. Bee-papers cannot be published as cheaply as metropolitan dailies. Special lines cost more, because the patrons are limited. Let our special periodicals be high-class in a literary point of view. Let them discuss the live issues of the pursuit, in the present day, that are of interest to all the practical bee-keepers.

A. N. Draper did not want a paper filled with one idea merely; he wanted it to cover all the live issues, and apicultural news of the day.

A. I. Root said he was sorry that friend Hutchinson was not here. He was detained by illness. We want more charity in regard to advertisements. We need buggies, saws, and all other useful articles that bee-keepers use, and advertisements of all good articles are of value to them. Why should we not tell them where such can be obtained at a reasonable price?

The President's Address.

Hon. R. L. Taylor, of Lapeer, Mich., President of the Association, read his annual address, which was listened to with close and undivided attention, as follows:

We meet under the disadvantages attending a season the most unpropitious probably within the memory of the great majority of living bee-keepers. The worst phase of ill-fortune may be avoided by facing it with cheerfulness, and this trait may be cultivated by remembering that such a season is not without its advantages.

In the first place, there has been such an advance in the prices of our product as not only to bring comfort to those who are so fortunate as to have obtained a crop, but also to leave a more or less permanent effect upon future markets.

This is so in the nature of things; but it will be so also because an adverse season gives more and better data for a sound better judgment as to the cost of the production of honey. Apiarists will learn that the years must be averaged, and they will not be in such haste to dispose of their crop in a favorable year on the first offer of a price that would bring a fair profit for the labor and expense of that year, by itself considered. Past and future rainy days must also be provided for.

Then such adverse seasons are discouraging and weeding out to those who have undertaken the bussness on account of the supposed supreme ease with which money is made in it. When such learn that there is out-go as well as income—that there is liable to be much unproductive labor and expense—their feelings undergo a revulsion, and the business is dropped.

This is the class that breaks down the home markets, and we can spare them with great advantage to the industry. Consumers, too, will learn, when they see the empty markets, that honey is not made to order. They will have less fear of adulteration, and be more alive to the necessity of securing a supply seasonably.

May we not hope also that the attention of bee-keepers will be more effectually called to the fact that their product may be kept in perfect condition from a year of abundance and low prices to a time of scarcity and profitable prices.

Total failures are expensive, and bristle with other unpleasant features; but we do well to consider compensating aspects, and indulge the hope that we are not paying too high a price for the benefits that are to follow.

One of the chief objects of the sessions of this Association is, presumably, by the exchange of thought and experience, and by discussion, to increase the sum of our knowledge of the business in which we are engaged. It goes without saying that we ought to make the most of our meeting in this respect. Let us have the fullest and freest discussion, without personal feeling or anger, on any side. I think there has been sometimes a sensitiveness evinced on the part of some—a disposition to require our speakers to begin or end, or interlard their remarks with, "in my opinion." This is unnecessary. No one among us is vested with authority to say finally just where the truth lies. It is understood that every one who speaks is expressing his own opinion only; and is it not better that this be done as sharply and critically, and forcibly as possible?

There should be none among us who has a device or method or theory which is new or peculiar, but is broad enough, and courageous enough, to be willing to see it vigorously attacked in debate without in the least feeling that the discussion is personal. The freest discussion leads to the best understanding, and this furnishes the best foundation for the most lasting kindliness of feeling, and more than all, there is nothing better calculated to determine the truth.

The floating character of the membership of our Association seems to me to be its most unsatisfactory feature. Practically there is no fixed membership to give it continuous life from one annual session to another. Indeed, even the officers elected at one session are not members of the next unless they seasonably and voluntarily pay the required fee; and not infrequently we perpetrate the incongruity of electing as officers those who at the time are not members. Why should we not have the advantage of the stability which could be secured by becoming incorporated under the law? Without doubt a plan could be devised by which a large body of permanent members might be secured, and provision also made by which a combination with the Bee-Keepers' Union could be satisfactorily effected. It might be well to submit the matter to a competent committee for consideration.

It is perhaps none too soon to form plans and make preliminary arrangements for a proper display of our industry at the coming World's Exposition, to be held at Chicago in 1893. Doubtless there has never been so excellent an opportunity for a grand exhibition of the appliances and products of the apiary, and there may not be such another opportunity for a generation.

I would recommend that immediate action be taken to secure as superintendent of such department the person of our choice, and such other measures adopted as may be deemed advisable and necessary to guarantee, in the undertaking, a success hitherto unheard of. Prompt, careful and vigorous action will be demanded, and we must not permit it to be wanting.

I have information that the United States government has an appropriation of $5,000 which can be used in the interests of apiculture. Our highest apicultural and entomological authority suggests that as we have been benefitted by the Italian and other imported bees there may yet be others, natives of the islands of the Pacific, from which we might derive still further advantage.

The importation of any new race that might be found could be cheaply made by the government. It is recommended that such action be taken here as will impress upon the Secretary of agriculture the importance and desirability of action in the matter on the part of the government.

Almost every occupation has its attendant dangers, and apiculture is not exempt. In this, as in the use of machinery, horses, etc., accidents may generally by the exercise of care be prevented. It stands us in hand to be more than usually careful in the case of bees, because the public being unacquainted with the causes of irritation on their part, consider their attacks purely vicious, without reason and unavoidable, and as apt in case of accident to pronounce them a dangerous nuisance, when, in fact, the person injured, or some one else, has ignorantly been the direct cause of the attack. I am led to speak of this subject by an accident that happened in my own country. A heavy highway scraper drawn by a four-horse team was working upon the road where five or six rods away were a few colonies of bees. The bees attacked the horses and driver in swarms, and three horses were killed on the spot. To the unskilled there was no reason for the innate viciousness of the bees, while to the experienced, the thundering, earth-jarring crashing of the heavy machine on the stones in the baked earth was abundant cause. The lesson is, that if for no other reason than to prevent their bees from falling into disrepute, bee-keepers should use thoughtful care in the location and management of their apiaries.

As a means of gathering and disseminating information, a certain space in our journals devoted to the topic of the management of bees with reference to the avoidance of accidents, would be an excellent thing.

Now, in conclusion, let me exhort you to look to the future with undimmed hope. What has been will be. Fruitful years are sure to follow. It is for us to prepare for them with unabated courage. The snatching of victory from defeat is what shows a leader to be a great captain. The faint-hearted indolent will fall out by the way, and leave a greater fruitage to be shared by those who confidently look for the morning.

On motion the following were appointed a committee to consider the recommendations contained in the President's address—Dr. A. B. Mason, Thomas G. Newman and Eugene Secor.

It was moved and seconded that a committee consisting of Dr. A. B. Mason, Thomas G. Newman, and R. McKnight be appointed to interview the World's Fair officers for the purpose of securing an assignment of space. After considerable discussion, the matter was postponed until 11:00 o'clock the next morning.

Jesse Oren, E. R. Root, and S. A. Shuck were appointed a committee to examine the exhibits that had been brought to the Convention by members of the Association.

After a short recess Mr. A. I. Root read the following on

Bee-Pasturage of America.

Motto: "Have faith in God."—Mark 11:22

Perhaps you may think my motto is rather strange for an essay on the Honey Resources of America. Perhaps it is: but I believe it is applicable to the subject in question. For some time it has seemed to many as if our industry was going down hill. We have been in danger of losing faith in bee-keeping: and I fear that some of us have been tempted to lose faith in the Great Ruler of all things. How can a man be a successful bee-keeper without faith in an All-Wise over-ruling power? How can he, in fact, be successful in anything in this wide world, without faith in God? In working and devising means, and in planning for the future, what incentive is there to push ahead, unless we have this faith? Perhaps some of you will agree with me in a general way; but I want you not only to have reverence and respect for the All-Wise Creator, but to have faith that He cares for us, loves us, keeps watch over us, and hears prayer.

During the past few weeks we have had an unusual amount of rainy weather—at least such has been the case in Ohio and adjoining States. Men have planned, but God seems to have thwarted their plans, by so much moisture. Shall we complain of Him? Surely not. The words of our motto bid us "have faith in God." Shall we grumble at His dispensations? By no means. There are certain things we can control, but we cannot control the weather—at least we have not done so yet; therefore we may safely say, just now, at least, that the weather is God's part, and all we have to do is to attend to *our* part. Perhaps some of you will say that I do not know what it is to have my bread and butter cut off by such unheard-of weather. I know something of it, dear friends. But I have not looked sour nor felt cross yet, although I sometimes have to say to myself, "Thy will, not mine, be done."

It has been very perplexing for me to keep a large force of hands at work, for we do not send our men home when it storms, as many establishments do. Again and again have I asked God in the morning to give me wisdom in devising ways and means to keep my men at work, and at the same time have them work profitably. So far the answer has come, and I have often wondered how it was that things change around, and seem to dovetail one into another, in such a way as to call for just the man that I did not know what to do with next. Then how much happier one feels who has faith in God, and, as a natural sequence, faith in humanity! I fear, dear friends, I should not have been here, when so many things seemed to need me at home, if it were not for faith in God and faith in you. I believe we shall always be blessed and prospered in doing our duty—and duty seemed to call me here.

Now, about the honey resources of our own country. My faith is brighter to-day than it was a few years ago. I have prayed for our industry a good deal: and we have in our conventions prayed that God might bless our undertakings.

and strange and unexpected blessings have come. They do not always come right to our door; but if we have faith in God, we ought to feel just as happy to see them coming to our neighbors' doors. Some of them have come to our neighbors who live a great way off; in fact, some of the greatest blessings have dropped unexpectedly among bee-keepers away off on the Great American Desert.

Years ago I talked about a honey-farm, where plants could be blossoming in succession, one after another, so as to keep the bees constantly at work—yes, even through poor seasons. The honey-farm project seemed for quite a time to be a failure; and at the present time, it seems pretty certain that we cannot afford to raise plants for honey alone.

The trouble is, it needs hundreds of acres to make bee-keeping a real paying business. Our good friend, Prof. Cook, has tried raising Rocky Mountain bee-plant, and the Chapman honey-plant, expressly for bees. The State of Michigan has been kind enough to furnish money for the experiment; but it did not pay. Our fond hopes in that direction have been, in one sense, dashed to the ground.

In my trip to California, I had this in mind; but I passed over all those thousands of miles and did not notice or hear of anything particularly encouraging. The white sage does not yield honey every year, and our California friends have, like us, had poor honey yields for so many years that some of them are disgusted, and are about to give up. Meanwhile, however, we were moving along, even though many of us—perhaps the most of us—did not know it.

The silly falsehoods about all the honey, both comb and extracted, being adulterated had to be fought down; and we found that lies, like everything else that belongs to the evil one, died hard. Some of us had become almost discouraged when even the religious papers seemed very loth to let go or retract these harmful mistakes they have promulgated.

We kept fighting, however; and being three-hundred thousand strong, our blows began to tell. Honey was slowly making its way into the homes of our land, but we did not seem to know it. The grocers were waking up, too; and it only needed the seasons of scarcity we have passed through, to set the people clamoring for honey, and even offering prices we had no expectation of realizing again. Then some of our California friends who had let their bee-ranches grow up to weeds, began to say: "If you will guarantee 7 cents per pound for nice extracted honey, I will fix up my ranch and start bee-keeping again." The advance in price gave them faith.

Let me tell you of a little incident that shows how dull some of us are. I think it was nearly 10 years ago that I was traveling in a sleeping-car. My neighbor was evidently a farmer, and he, like myself, had decided to pay $2.00 for a good, night's rest. I noticed by the looks of his hands that he was a son of toil. Finally he explained that he went West a few years before. He bought some desert land, and got up a scheme to irrigate it. Then he commenced raising alfalfa. His crop had brought him so much money, that he had just been to see the old folks, and to tell the neighbors of his good luck. He offered me alfalfa seed at an insignificant price, but I was not then prepared to handle it.

I asked him about bees. He said he did not know anything about them; but he said that, by their management with irrigation, alfalfa is in bloom almost continually, and that the blossoms smelled like clover-blossoms. He told me how many acres there were in his vicinity, but I thought little of it. It is now not quite a year since friend Ball came to see us, wanting to sell us a carload of alfalfa honey. Dr. Miller, at the same time, found some near Denver, Colo., and sent me a sample, to show what it was like. This was, perhaps, two years ago. Alfalfa honey is now scattered all over the land.

In passing through the desert wastes of Arizona, I noticed thousands upon thousands of acres of a shrub or tree that looked a little like a peach tree, or perhaps a little more like wild cherry. I wondered whether it bore honey, but nobody could tell me anything about it. A few months ago we were offered a carload of mesquite honey. We had heard something in regard to it, but we had no hope that it would be equal to alfalfa. We ordered some; and after the honey came, we were astonished to find it so nice; and I thought Mr. Calvert was exaggerating when he said he believed a good many people would like mesquite honey as well as the alfalfa. Well, at present I am quite certain that mesquite honey is destined to bring a *higher* price than the alfalfa. More mesquite honey is still offered by the carload, and it will soon be scattered into all the country towns of the United States. Possibly it will go across the ocean and into Canada. It surely will if those who put it up do their work honestly and well.

The great public is beginning to recover from its disgust, created largely by poor bee-keepers—bee-keepers who were slipshod in their methods of work, and slipshod in their consciences. Are there any such here to-day? The latter is more to be feared than the former. If your faith is waning, believe me when I tell you that the saddest kind of infidelity in the world is the kind that says that honesty is *not* the best policy. When your stock of faith gets so low and uncharitable as that, you are in a bad predicament. You are pretty nearly as bad off as were Christian and Hopeful, when imprisoned in Doubting Castle, and pounded and bruised every day by Giant Despair. Now, let us put up our honey and send it off, with a bright and living faith in the saying, that "honesty is the best policy."

Perhaps some of you say, "Why, Bro. Root, this is a big thing for the Arizona men, but how does it benefit us to see honey coming by the car-load from Arizona, to compete with our product?" Do not be troubled. Let us rejoice at their good fortune, and eventually God will, in His infinite love and wisdom, show us that He has not forgotten His children out here. I do not know just how it is coming, nor when; but I heartily agree with the Psalmist when he says, "I once was young, but now am old, yet I have never seen the righteous forsaken, nor his seed begging bread." When I was in California I heard about their failures and low prices, and I really felt sorry for a good many of the hard-working friends, especially for some who were a good deal in debt.

After friend Mercer had taken so much pains to take me around over the country, and would not let me pay for the livery that was hired specially for my accommodation, my conscience troubled me; and when, the season after, passed, with a still poorer crop than he had ever had before, I felt greatly troubled, for fear these good friends would have hard work to pay their debts and keep above water; but during the past season friend Mercer has had a great outpouring. It seemed almost as if "the windows of heaven," which we have read about, were opened, and honey came down by the car-load; and, oh, such beautiful honey. You would think a glass-jar full was almost empty unless you lifted it to see; and then the air-bubble moves so slowly when you tip it over that this beautiful clear honey looked like white transparent wax. When you put a spoonful in your mouth, "Oh, my! is it not beautiful?" When we sent it out to customers it was wonderful to see the letters of surprise and astonishment.

Well, California, Arizona, Colorado, Idaho, and many other places that I do not know much about, are getting full of enthusiasm—especially those districts where irrigation is practiced; for there they have sunshine every day in the year. When we want more wet we can irrigate, as our friends do. God's part would be the sunshine—our part would be the windmills and the big rivers turned in their courses.

But, we are not ready yet to sell out and move on to the desert. We may rejoice that the prophecy is coming to pass when the desert shall be made to blossom. But our duty—or, at least that of the greater part of us—is to have *faith* enough to stay where we are, and to remember the blessings we enjoy. We also want to keep in mind that plenty of rain is a very great blessing. These great crops of honey from the desert-wastes of the West, will open up business in many ways.

Perhaps you say again, "All the above is very well for the large bee-keepers, and for the supply-dealers; but how about the smaller ones who have to work hard, and yet are not better off? My friends, we must still hold to our motto—"Have faith in God;" and if bee-keeping does not seem to give us a living in our present location, we should work at something else, meanwhile. He that is faithful in few things, shall surely be made "ruler over many things." There is plenty to do, with good pay, so far as my experience goes, in every locality. But we must be bright and wide-awake, and on the alert. The trouble is, we let opportunities slip.

The great world soon decides that it is better to put wide-awake men in places of trust and importance; and, my friends, there is nothing else in this wide Universe that will do so much to make a man energetic, as to "have faith in God." according to our motto. Why, the very thought of it fills me with animation and life. The rain makes trouble, it is true; but my faith in God tells me that all things shall work together for good to all who love him.

Some of you may remember what I found in the vicinity of Salt Lake City, Utah—beautiful white honey, equal to any in the world, from sweet clover. The sweet clover grows all over the mountains and plains; in fact, it grows on the saleratus land, around Salt Lake, where nothing else will grow. In many localities near Ogden and Salt Lake City, they told me that sweet clover was the only source they had for honey; and this year we have reports of apiaries of some size that have given 200 pounds per colony. The sweet clover also pays in other ways besides the honey it yields. It furnishes valuable forage in that locality, and when turned under, it makes the ground fertile for other crops that would not produce anything before, on account of the alkali, or "saleratus," as they call it. Probably hundreds of colonies of bees would do well in this region, where only one colony is kept now. So, here is another of God's gifts, as yet almost undeveloped and unknown. Sweet clover is there, growing spontaneously in all directions.

Past experience seems to have taught us that not only is it true that no plant bears honey invariably, but it is also true that a great many plants may now and then give quite a yield of honey. Doolittle got quite a crop of very nice honey from teasel. Dr. Miller had quite a little honey yield from cucumbers, where they were raised for pickle factories. Spanish-needle, from the swamps, sometimes gives large quantities of very rich amber honey. Last season Dr. Miller had a yield of very nice honey right along for months; and, if I am correct, he does not know yet where it came from. When I visited him he asked me if I could see enough white clover, or clover of any kind, to account for the amount of honey that was then coming in. I could not. And yet there was nothing else visible to us, in our miles of travel, that should furnish it.

Rape sometimes gives quite a flow of beautiful honey in localities where the plant is raised largely for seed. Mustard fields also furnish more or less; and we bee-keepers should look for localities where mustard-raising is a business.

The question is sometimes asked, "Shall we give up our location and move to a better one?" Sometimes it may pay us to do so, if we have decided that honey raising is to be our business for life. But after we make the move, we may discover that the honey has ceased in the new location; and at the same time we may find, too, that the old locality has been blessed with a bountiful flow.

Instead of moving I would locate a few colonies, say five or six miles away, in different directions. Many of our bee-keepers who have "out apiaries" have in this way found points where the honey-yield is much better, year after year, than in the home apiary. It is a fact, that no two points seem to average exactly alike. Some honey is to be found almost everywhere, and occasionally there comes a few days of bountiful yields almost everywhere.

Let us have faith—faith in the honey-bees; faith in our fellow-men; faith in hard, earnest work, with both brain and muscle; and finally let us, in the language of our motto, "Have—faith—in—God." A. I. ROOT.

J. D. Adams said his bees had collected honey which he calls heart's-ease; though he had lots of Spanish-needle, from which he does not believe he gets any honey.

J. M. Hambaugh showed a sample of Spanish-needle honey. He believes in migratory bee-keeping, and keeps three apiaries from which he aims to get two crops, and moves his bees from the hills to the bottom-lands every fall, and believes that his bees get but little honey in the fall until the Spanish-needle blooms. In the fall, he places his bees right among the Spanish-needle bloom. He believes in saving steps to the bees, and knows that there is an advantage in putting them right in the harvest fields. He realized 2,500 pounds of clover honey, and 8,000 pounds of honey in all, and gets better returns from his bees than he could expect on the hills. Spanish-needle honey sells very well.

A. N. Draper had moved his bees (96 colonies) from Alton to nine miles below. He got 4,000 or 5,000 pounds. His honey was the same as Mr. Hambaugh's. It is very thick.

Dr. Miller asked about the use of carbolic acid.

Mr. Axtell used carbolic acid to keep the bees from honey.

A. N. Draper used carbolic acid to keep the bees from a watering well.

Dr. Miller asked if there was any unpleasant odor left.

Mr. Draper said: Yes, for a day or two.

Mrs. L. Harrison said that in Scotland county, Mo., she went through hundreds of acres of Spanish-needles—it was literally a sea of gold, and the bees were rolling in the honey.

H. Kellogg said there were two kinds of Spanish-needles—the one producing honey has larger flowers.

S. A. Shuck called attention to the button-ball as a honey-producer. This bush is mentioned in the bee-books. It grows in the Illinois bottom lands, and yields honey after the linden in July. It commences when the water is on the land, and the button-bush is barely out of the water. It is not a plant of extensive production, as it lives only in the water. He exhibited samples of very light-colored honey from it.

On motion the Convention adjourned until the evening.

HONEY AND BEESWAX MARKET.

DENVER, Oct. 13.—We quote: 1-lbs., first grade, 16@18c. Ext, 7@8c. Beeswax, 20@25c
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.
M H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb. Southern, 70c per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 24.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 18.—The demand for extracted honey is good, with almost no dark on the market. We have bought the second carload of California honey, for which there is a good trade; but it will not fill the place of Southern honey with many manufacturers. Extracted honey brings 5½@8 cents a pound. There is no comb honey in our market.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

BOSTON, Oct. 24.—Honey is selling very freely. Demand fully equal to the supply. We quote best 1-lb., 18@19c; 2-lb., 16@17c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

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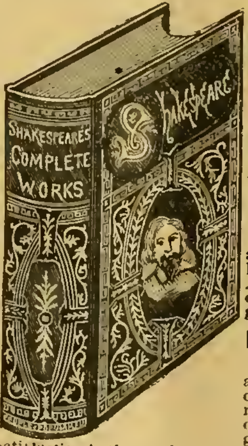

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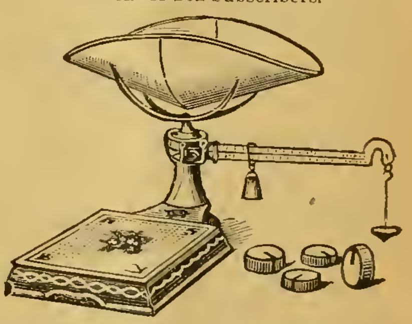

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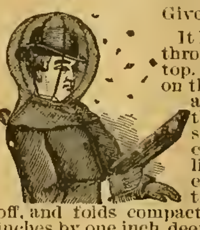

It has 5 cross bars riveted through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring brass; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. It weighs only 5 oz. Price, $1.00.

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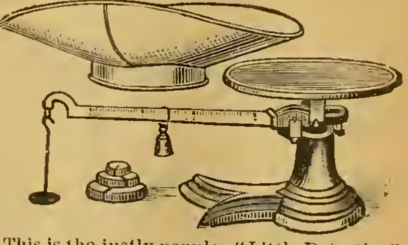

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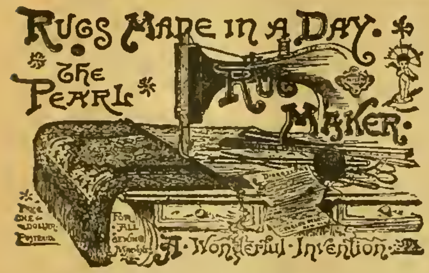
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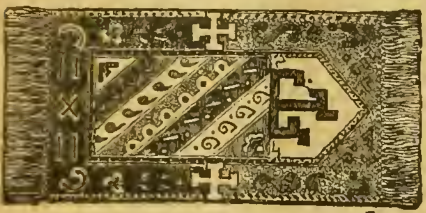

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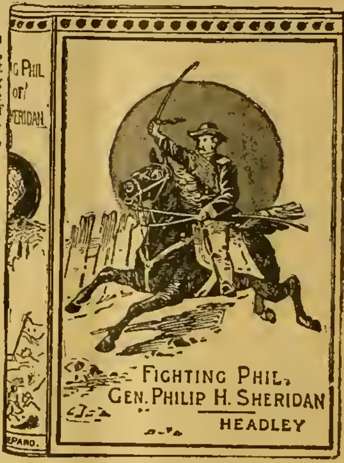

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Some person has written that when a people are capable of appreciating a fine thought, a man is born who can present it to them; and this life history of General Sheriden seems to be the history of a man born to be the admiration of a people, and to teach the lesson of what can be accomplished by the humblest through perseverance and pluck. We find here a brief history of our cavalry, which did not deserve the name of cavalry at the opening of the war. Southern gentlemen always rode, and it was small wonder that they found cause for much amusement in their Northern brothers' style of horsemanship. But under such a leader as Sheriden all things were possible, and the record of the splendid achievements of our cavalry is unsurpassed in history. The requirements at West Point in regard to scholarship, the numerous rules and regulations as to conduct, the daily work required, the whole life, in fact, of the cadet, make up an intensely interesting chapter in this volume. While this is called a history for young people, it is one that every man and woman in the United States should read, in order that they may realize what a genius and a general we had in "Fighting Phil."

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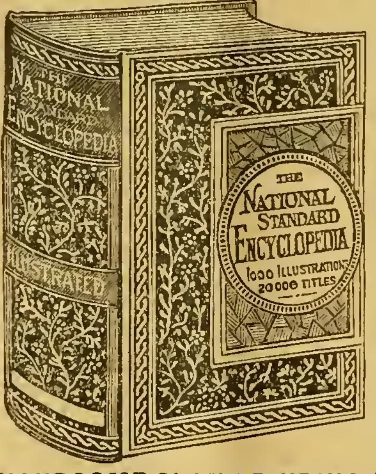
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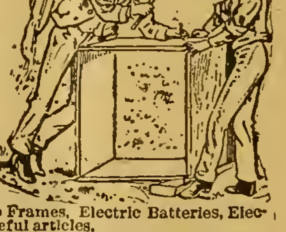

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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Nov. 15, 1890. No. 46.

EDITORIAL BUZZINGS.

The North American Bee-Keepers' Association is to be incorporated by law. We hope that this step will be the beginning of a new life for it, and that the glorious *past* will be even eclipsed by the grander future of the International Society.

A Little Queen in the Arnold hive at Richmond, Iowa, died on the 28th ult,. and this is what her disconsolate father says about the sad event. They were going to the Keokuk Convention, had this death not occurred ·

> Sad are these few lines to us. The darling queen of our home was taken from us by the dread disease, diphtheria, on Oct. 28. She was my only child, a daughter, in her eleventh year. (She was the granddaugher of J. O. Todd.) We are all one family. She was not afraid of the bees at all ; she would often put on a bee-veil and be out with us in the apiary.
>
> I. N. Arnold.

The Bee Journal condoles with the stricken family.

The Michigan State Convention will be held at Detroit on Jan. 1 and 2, 1891, and we hope it will be largely attended. Concerning hotel rates, Mr. M. H. Hunt writes hs follows :

> I was in Detroit lately, and made arrangements for the bee-keepers at the Hotel Normandie ; also I found that I could get rates for those who thought that the rates were too much at the Normandie. The Perkins Hotel on Grand River street, is being rebuilt, and is a good common place to stop at ; rates $1.25 per day. I am going to furnish them with a very fine sample of extracted honey to be on tap for the bee-keepers. I hope that we will have a grand meeting.

Foul-Brood.—In the Voluntary Essay read at the Keokuk Convention, from Mr. Allen Pringle (see page 762), it is stated that, though a copy of the Canadian Act, for the suppression of that dreaded disease was sent to the American Bee Journal and other bee-papers of the United States, that it was not published. If it was sent, it never reached this office, or it would have been published *at once.* We have, however, published several articles referring to it. One of them from Mr. Pringle, of nearly three columns, may be found on pages 597 and 598 ; another from Mr. J. E. Firth, of four columns, on pages 551 and 552. Besides these, there are several shorter ones.

The imputation that the "tribunes"—the "great guns" -*i. e.*, the editors of the bee-periodicals, we suppose—are too much "exalted" (in their own estimation, of course) to listen to advice from Canada, is absurd, and beneath the dignity of "the President of the Ontario Bee-Keepers' Association."

Harmless banter is all very well, but this would be taken for sober fact, by the generality of bee-keepers, were we to pass it by in silence. They would say, very innocently, that the "Voluntary Essay" was sent to the Convention because the matter was ruled out the bee-publications.

Now, Mr. President of the Ontario Bee-Keepers' Association, we take an appeal (kindly but firmly), from your hasty decision, to the apiarists at large, and have no fear about their sustaining the appeal, and reversing your unfair ruling.

Mice and Bees in Winter.—At the Keokuk Convention it was asked if mice and rats were injurious in a winter repository for bees. The answer was emphatic and proper—Yes ! In last week's New York *World* we notice a similar question from a correspondent in Ohio, which is answered thus :

> Mice are a decided nuisance in the apiary, and consequently must be guarded against. They will often enter the hive standing out-of-doors when not excluded, and make extensive depredations. Sometimes, cutting a space in the combs, they will make their nests there.
>
> The animal heat created by the bees makes a tempting place for their winter quarters. The entrance to the hives ought to be sufficiently contracted to keep mice from entering.
>
> Rats are fond of honey, and when this is accessible, will eat quantities of it. The entrance of hives standing out-of-doors are too small to admit a rat. Where the bees are wintered in-doors, too great care cannot be exercised to keep the apartment clear of both rats and mice, as their running over the hives, even if prevented from entering them, disturbs and irritates the bees.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 751 of last paper.

An Enjoyable Visit.—According to announcement, the business men of Hamilton, of Ills., took 54 members of the International Convention in carriages to the residence of Messrs. Dadant & Son, in the afternoon of Friday, after the last session. The bee-keepers seemed to take the place by storm, and thoroughly enjoyed their visit. The Keokuk *Constitution-Democrat* of Nov. 1, contained the following concerning the affair :

> Delegates to the Bee-Keepers' Convention Entertained at the Dadant Apiary.—Yesterday afternoon 54 lady and gentlemen delegates to the International Bee-Keepers' Convention, visited the Dadant apiary, two miles north of Hamilton, and were right royally entertained. They were given the freedom of his handsome residence and grounds.
>
> They examined his rat-proof granary, sampled his fruit, looked at and talked about his bees and hives, passed their opinions about his frames and foundation comb, played with his jig saws, tasted of his honey, looked at the immense quantities of beeswax in store, visited and complimented his wine rooms and presses, looked into his ice-house, sipped his wine, ripped his bee-hive lumber, ate his cake, asked questions about his shrubbery, filled their pockets with apples, took possession of everything and everybody on the place, and came away as happy as larks on a bright Spring morning. But the happiest man in the crowd was Charles Dadant.

"Milk and Honey."—This item is from last week's New York *Tribune*, and we shall be glad to have all the other papers in America herald the news that "milk and honey" are "grand things for poor humanity." That is a true statement of it—both for body and mind ! as well as for food and medicine. Here is the item :

> Mr. Thomas G. Newman, of the American Bee Journal, thinks milk and honey a very wholesome combination—"grand things for poor humanity."

The Order of the King's Daughters, in New York City, has actively identified itself with the great Charity Doll-Show, to open in New York about the middle of December. Dolls are to be dressed for this exhibition, and then will be distributed among the worthy poor children in public institutions. The King's Daughters could undertake no better work. Particulars are given in "Frank Leslie's Illustrated Newspaper" of last week.

All Who Subscribe for the American Bee Journal can hereafter have our Illustrated Home Journal also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

CONVENTION DIRECTORY.

1891. *Time and place of meeting.*

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

International Bee-Association.

President—Hon. R. L. Taylor..Lapeer, Mich.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

GLEAMS OF NEWS.

The National Bee-Keepers' Union.—The following from E. Salisbury, of Ossian, Ind., is right to the point, and worthy of consideration. He says :

> I fully endorse the last clause of N. E. France's article on page 731. He says : "It is strange that any bee-keeper should hesitate to join the Union. It ought to have thousands of members, where now it only has about 450."
>
> Then why not, each and all, do something toward getting members and swelling the ranks of the Union? From what I can gather from the Bee Journal, it has accomplished grand victories for its members ; but those not belonging to the Union have no claim for aid, and they will not be recognized by the Union. Keep the ball rolling, and let the good work go on. The annual fee is only one dollar, and no one is too poor to become members.
>
> E. Salisbury.

All membership fees received after this date, will pay for the full year 1891. The small membership so far is a disgrace to the bee-keepers of America. The Union ought to have a hundred thousand members, and then it would be abundantly able to defend the whole pursuit from defamation and misrepresentation, as well as to maintain every apiarist in his or her rights under the Constitution of the United States.

The Utah Bee and Honey Show, this year, was very good, and the following will give some idea of its character, as well as the small premiums offered :

> The bee and honey awards at the Utah Territorial Fair, were as follows :
>
> Snider, Taufer & Swaner, Salt Lake City—Best colony of bees, diploma and $5.
>
> Snider, Taufer & Swaner—Best 20 pounds of extracted honey, $3.
>
> Oliver B. Huntington, Springville—Best 20 pounds of comb-honey, $3.
>
> Snider, Taufer & Swaner—Best bee-hive, diploma and $2.50.
>
> Snider, Taufer & Swaner—Best display of bees, wax and honey, diploma.
>
> Such premiums are no encouragement for bee-keepers to show ; still there is general dissatisfaction among other exhibitors than bee-keepers. Small premiums are by no means the worst of our troubles ; they are bad enough, but when it comes to incompetent judges going through the farce of awarding premiums, it generally makes a man's blood boil. For instance, the judges on the honey exhibit were a poultry-man, green-grocer, and a gardener ; not one of them had handled bees, and seemed to know more about sampling honey than anything else. One of them said, "Well, we used our best judgment in deciding." I told him that there was no doubt about that, as his judgment on honey was very poor, at best.
>
> It would be just like putting as a committee, a mason, a painter, and a horse doctor to judge a vegetable show, and so on through the whole category of exhibits.
>
> Such methods are always sure to give general dissatisfaction, and cannot be too strongly condemned. Under such circumstances one who takes premiums does not know that he is justly entitled to them.
>
> We hed the display photographed, but none of them were good, and we did not have any printed.
>
> The following clippings will give an idea of what others thought of our exhibits :
>
> An interesting feature of the Fair, connected with the exhibits on the main floor, is the bee and honey display by Snider, Taufer & Swaner, who show in glass cases the workings of the bees. These little creatures, emblematical of the industry of Utah's people, are well worth seeing.—*News.*
>
> Three men engaged separately in bee-culture, in this city, produced five tons of honey this season. They have all the best appliances for the business, and uniting for an exhibit, have placed their display in the hall under the name of Snider, Taufer & Swaner. Honey is shown in the comb in little frames, and in jars after extracting. Bees are at work in hives, and, in fact, the entire system of bee and honey-production is shown in this exhibit, and it certainly is an interesting one.—*Tribune.*

QUERIES and REPLIES.

The Production of Comb and Extracted Honey.

Written for the American Bee Journal

Query 738.—As I am thinking of keeping bees, and desiring to make it a financial success, I would like the opinion of leading apiarists upon this question: As a profitable undertaking, which should be produced in an apiary, com-bhoney or extracted ?—Ohio.

Both.—G. M. Doolittle.

Both kinds.—J. P. H. Brown.

Both ; and the most of the kind that your market demands.—A. B. Mason

Opinions are divided. I am inclined to give the preference to extracted honey.—M. Mahin.

The person, the locality, the market, and many other things, have much to do with making it a financial success.—H. D. Cutting.

All depends on your market. Here I find that it pays better to work mostly for extracted honey.—P. L. Viallon.

I am an advocate of extracting, as a financial consideration ; yet surroundings and location have something to do with it. —J. M. Hambaugh.

This depends on many things. If I could sell extracted honey readily for two-thirds the price of comb-honey, I think I should produce the extracted.—C. H. Dibbern.

That depends somewhat upon your location, and upon your market. Ordinarily both.—Mrs. L. Harrison.

Extracted ; because you can produce more than twice as much, and because you can keep a part of the crop over from years of plenty for years of scarcity.—Dadant & Son.

That would depend on your tastes, your markets, and the character of your honey. No one can tell without knowing your circumstances.—R. L. Taylor.

This question has been asked many, many times ; who can answer it ? I cannot without knowing the whole condition of things, viz : the man, the location, the experience, etc. As the boy said, "It all depends."—J. E. Pond.

That depends on the man and the place. It is doubtful if you can find out about the man in any better way than by trying both. You can give a fair guess as to the place, by seeing which kind the successful men about you produce.—C. C. Miller.

I think both should be produced, though much depends upon the market. Some persons prefer comb-honey, some extracted honey, and some want both.—G. L. Tinker.

This depends upon one's skill, tact, and market. I think one should produce both, and should study to learn how to do it ; and then place his emphasis where his market demands.—A. J. Cook.

I think that depends on circumstances and conditions. A rule cannot be given in advance, without knowing more of the surroundings and your capabilities.—Eugene Secor.

All depends upon your aptitude for producing one or the other, and your market, etc. In the aggregate, it is just as profitable to produce one as the other, of course. The great law of supply and demand should determine which.—James Heddon.

It has paid me best to produce both honey in the comb and the extracted article. And further, all my students, or those who started bee-keeping under my teaching and advice, have followed my plan of producing both articles, and they all approve of my plan. It pays a bee-keeper to be able to satisfy the market, and there is a demand for both comb and extracted honey.—G. W. Demaree.

Produce whichever your market demands or your tastes dictate. To produce both would give you greater experience.—The Editor.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

INTERNATIONAL.

Report of the Business, Speeches and Discussions.

Written for the American Bee Journal
BY C. P. DADANT.

EVENING SESSION—FIRST DAY.

President Taylor called the Convention to order at 7:30 p.m., and stated that Dr. C. C. Miller would preside at the piano, and sing the "Bee-Keepers' Reunion Song," and asked the audience to join in the chorus.

The first thing, according to the programme, was the following address by Dr. A. B. Mason, Auburndale, O., on

The Apiarian Exhibit at the World's Columbian Fair, in 1893.

Mr. President and Fellow Bee-Keepers :

The subject assigned me by the Executive Committee is one that should be of interest to every bee-keeper in the world, and more especially to those in the United States, for upon them it naturally devolves to look after the interest of the Apiarian Exhibit, and get matters in shape for the grandest display ever made, of the appliances used in, and the products of, the apiary.

That you may know just what progress has been made I will give you the last correspondence with the Exposition Management. On the 9th of the present month I wrote the Secretary as follows :

"While arrangements are being perfected for the coming World's Columbian Exposition, the bee-keepers of the United States and of the World, are quite anxious not to be forgotten. As reprentative of the bee-keepers of America, I wrote to those having matters in charge in Chicago, before the location was selected by Congress, and received a courteous reply, and thanks for calling attention to our industry.

"Now that matters are beginning to assume definite shape, I wish again to call attention to the desirability of providing space for, and giving encouragement to our specialty, and having been recommended by our National, and some of the State Bee-Keepers' Associations, to have charge of the Apiarian Exhibit at the Columbian Fair, I am anxious to do what I can to aid in perfecting suitable arrangements for such an exhibit.

"The next meeting of the International American Bee-Association is to be held at Keokuk, Iowa, on the last three days of this month, and the Executive Committee have placed me on the programme for an address on the Apiarian Exhibit at the coming Chicago International Exposition, and I would be pleased to receive from you some suggestions as to what provision will probably be made for an exhibit by bee-keepers.

"I would suggest that it would be desirable to have all Honey Exhibits grouped together, and that that from each State and foreign country be placed by itself, with one General Superintendent and one, or more, assistants, as may be necessary. The exhibit would very properly and naturally be placed in the Horticultural Department. Please give me any advice, or make any suggestions that you think would be of service to us at the coming meeting, where some definite action will probably be taken as to what we shall do at the Exposition."

To the foregoing I received the following reply, dated Oct. 11 :

"DEAR SIR :—Your letter in regard to bee-culture and a suitable exhibit of that industry, is received. The industry you represent will have proper place in the classification of exhibits, and ample facilities will be provided. The detailed classification is not yet complete, nor have we yet reached a period in the progress of our work which would authorize or permit an allotment of space. You might make informal application, indicating the nature and extent of exhibit proposed, and space you would require ; thereupon blanks will be forwarded to you, which you can fill out in accordance with instructions.

"For any information required, address this office, and it will be promptly supplied as it is gathered and classified.

Very respectfully,
BENJ. BUTTERWORTH, *Sec.*"

As soon as a World's Exposition was publicly talked of, I thought of the following plan, and as yet have thought of nothing better :

If possible, have our exhibit from the whole World grouped together. Then have the exhibit from each Nation, Province, State, etc., placed by itself, with a Superintendent to assign the location and space, and to have the general oversight of all, with one or more assistants.

To illustrate : Place every exhibit from Germany by itself, with a Superintendent from Germany, and have a large sign placed over the exhibit, marked "Germany," and decorated with the German coat-of-arms, and the whole place made attractive with German flags, and such other decorations as may be provided ; have about the same arrangement in regard to France, Great Britain and her colonies, and other Nations ; and the same for each State of the United States, with a large sign aver all, with shields and flags, with the exhibit from each State by itself, and the name of each State with its coat-of-arms over its exhibit, and such decorations as may be proper, and also have each exhibit marked with the name of exhibitor.

It would add much interest to displays to have the name of every article marked or placed upon it, so that "an unsuspecting public" would not be trying to buy beeswax for maple sugar, and extracted honey for maple syrup, and calling straw bee-hives, baskets ; or honey extractors, churns ; washing machines, ice-cream freezers, etc. ; or showing their knowledge of entomology, or their interest in that science, by calling bees, bugs, flies, etc.

If possible, have a fair-sized apiary on the grounds, to be decorated with a display of as large a variety of growing and blossoming honey-producing plants, as it may be possible to procure. The colonies to be in all sorts of hives, from the primeval log-gum, the box and straw hives, up to the most palatial hives of modern times.

If we can secure such an assignment by the Managers of the Exposition, we can make a grand display ; but it is possible we may not be able to do so. Each Nation and State may desire to have all their exhibits together. If such should be the case, would it not be a good plan for each National, Provincial or State Bee-Keepers' Society to choose a committee of one or more persons to have charge of getting up and providing for a suitable exhibit from their jurisdiction.

If the Columbian Exposition does not provide "the needful" in the way of premiums, it will probably be necessary for the Bee-Keepers of the several States to see to it that their State Legislatures make the necessary appropriation. Such a course would mean work for State Bee-Keepers' Associations, and as some of the Legislatures meet but once in two years, the matter may need attention during the coming winter, and every State Society should begin preparations at the next meeting.

At a recent meeting of the Nebraska State Bee-Keepers' Association, the Secretary, Mr. J. N. Heater and Mr. A. C. Tyrrel, "were selected to make arrangements for an apiarian exhibit in connection with the State Agricultural display for the World's Fair in 1892." So the Secretary wrote me on the 6th inst. He asked for such information and suggestions as I might have to offer.

Sometime since, through the "American Bee Journal," and "Gleanings in Bee-Culture," I asked for suggestions in regard to the proposed apiarian exhibit, and have not received a single suggestion from any one, but some have written asking for information.

I would suggest that this Convention choose a good-sized Committee to wait upon those having charge of the Exposition matters in Chicago, and urge upon them the desirability and necessity of having the Apiarian display all in one locality, and make such other represenations and suggestions as in your wisdom may seem best, and let the committee act at once, before plans for the Exposition have been fully decided upon. Unless we make our wants known, and authoritatively too, we shall not get such recognition as belongs to us.

That committee could be made up of Mr. Thomas G. Newman, Dr. C.C.Miller, President Taylor, Messrs. A. I. and Ernest Root, R. McKnight, W. Z. Hutchinson and such others as are in attendance at the convention who will go to or through Chicago on their way home.

A meeting of representatives of a goodly number of the State Horticultural Societies of the United States was held in Chicago during the past summer, for the purpose of making arrangements for the proper exhibit of fruits, grains and seeds, and committees were chosen, a person recommended to have charge of the exhibit, etc. Similar preliminary work has been done by horse-men, cattle-men, sheep-men, swine-men, and others, and why not bee-men do the same ?

A. B. MASON.

Rev. W. F. Clarke stated that Ontario had already taken steps in regard to the Columbian Fair; that the Province expected to make a very large display. He recommended putting all the honey exhibits of the different Countries in one place, and appointing a committee at once to see about it.

Mr. Clarke also stated that the McKinley Bill would have a discouraging effect on foreign exhibits, though it was not likely to have much on the Canadian exhibit.

Here ensued a short political discussion, in which the Canadian delegates seemed to be of the opinion that the greatest objection to the McKinley Bill was the hostile spirit which it showed, and which they thought was likely to induce a spirit of retaliation.

It was then decided to appoint a committee composed of Dr. A. B. Mason, R. McKnight and Thomas G. Newman to interview the authorities of the World's Fair with regard to securing ample space for the necessary exhibits of honey and apicultural appliances at Chicago, in 1893.

R. McKnight suggested that his name be withdrawn from the committee, and another name inserted instead, unless the bee-keepers of Canada were expected to join the United States bee-keepers in their exhibit.

W. J. Finch, of Chesterfield, Ills., said: If I understand this matter right, this is to be an International Fair, and the people of Canada have a perfect right to exhibit under the auspices of the United States bee-keepers, if they wish to.

R. McKnight said: I do not think that the bee-keepers from all countries will be allowed to exhibit in the same place, as it is not customary.

Dr. Miller asked whether Mr. McKnight, who had experience in the matter, could not help to solve this difficulty.

W. F. Clarke thought that any nation had a right to ask for space at the Columbian Fair, and could not see why the Canadian bee-keepers could not be allowed to exhibit in the same place with the United States bee-keepers. He thought that allowing Mr. McKnight's name to be dropped from the committee would rather deter them from exhibiting.

R. McKnight said that the Canadian exhibit would depend upon the action of the Canadian Government, and thought it would be unreasonable to ask for a special location for the bee-exhibit of all countries. A great deal of money was needed for the exhibits, and this had to be furnished by the different States and Provinces to their exhibitors. This would place the exhibitions under the separate control of the different Governments. He thought that the bee-keepers of each State should ask for appropriations from their Legislatures, if they wished to succeed. He was on the committee sent for a four-months' exhibit in London, of Canadian bee-culture, in which they exhibited eleven tons of honey, and had the people sample it by tea-spoonfuls, to advertise Canadian productions, and the English people tasted it, to the amount of four tons, all by tea-spoonfuls. He had the exhibit of 26 different bee-keepers, and after an expenditure of over $2,000 in cash, returned to the exhibitors from 14 to 18 cents per pound for comb, and 11 cents for extracted honey. The exhibiting committee was composed of four members. He thought that the United States should have sufficient pride not to be outdone by Canada in such matters.

Dr. Mason said: At the International Exposition of New Orleans, the State of Ohio gave $500 to a bee-keeper to take charge of the State's exhibit. Whether we go to the Columbian Fair as International or as separate States, does not matter. I expect to ask the State of Ohio to grant $1,500 for the Ohio bee-exhibit, and each State ought to have a grant, in order to make an exhibit worthy of the interests represented; but there is no reason why we should not have the exhibit all in one location. I must say, however, that I object to the motion as stated, and desire that the bee-keepers' committee be instructed to ask, not only for space, but for an assignment, that will secure us a recognition and liberal offers of premiums, etc.

Further consideration of the question was then postponed until to-morrow at 11 a.m., when the committee would be heard from on this matter.

BEES AND OTHER PURSUITS.

The subject, "Can poultry raising be carried on successfully in connection with bee-keeping?" was discussed by Dr. C. C. Miller, who read a humorous letter from an imaginary German to an editor, telling him about how Sockery prepared to set a hen.

At the close of his remarks the Association was favored with some choice selections of music by Fields Brothers orchestra.

An informal recess of five minutes was taken, and when called to order, a committee was appointed to examine the exhibits, and make a report. The committee consists of Dr. J. Oren, E. R. Root, and S. A. Shuck.

BLACK ANTS.

The following question was then discussed: "What can be done to do away with the black ants, that destroy solid bottom-boards of hives?

Ernest R. Root said that he knew of the use of coal-oil, but could hardly recommend it, on account of its offensive odor.

Dr. Oren used tar on the underside of the bottom-board.

Dr. Miller had seen bottom-boards which were honey-comed by ants in such a way as to destroy them in a short time. He thought the only remedy was to keep the bottom-boards off the ground.

J. Blanchard said that white ants troubled him; he had to set hives on tiles, and this effectually got rid of the ants, as they do not like to work in the light. These ants were very injurious, as they destroyed everything in reach of them.

J. D. Adams said that petroleum soaked into the wood; coal-tar applied hot on the under side of the bottom-board, would prevent them. Corrosive sublimate spread on the ground will kill the ants.

R. McKnight asked if any had been troubled with ants, who keep their hives off the ground?

Dr. Miller said: I do not think that if the bottom-boards are raised from the ground, any one will be bothered by ants.

S. A. Shuck said: I had a few hives bothered by ants, but never when they were 3 inches or more from the ground.

R. McKnight said that some told him to scatter salt about the bottom-board, to prevent the ants from injuring the hives.

Wm. Lyon, of Burlington, thought that the salt would be objectionable to the bees.

Dr. Jesse Oren sated that he painted even the inside of the hives with coal-tar.

J. D. Adams stated that if coal-tar was applied hot, it would harden on the boards, so as not to be objectionable to the bees.

APICULTURE AS A SPECIALTY.

The next question was: "Does apiculture pay financially as a specialty if run independent of the supply business or journalism?"

R. McKnight said that bee-keeping paid him, and that although he did not make his living by bee-keeping, he could do it, if necessary. He considered himself a specialist, and his neighbors also considered him as such. He thought bee-keeping gave as good profits for the investment as any other special business. He believed that bee-keeping was preferable to many other vocations. A man could make bee-keeping pay as a specialty, undoubtedly.

TO RIPEN HONEY.

The next question was, "It sometimes happens that some of our extracted honey is thin, unripe—yet mostly sealed. Will you please inform us how to ripen or thicken such honey. We usually extract once in from 7 to 10 days, during the honey-flow, letting the combs become nearly all sealed first, and yet some days get thin honey, especially in the combs that are taken out after noon.

C. P. Dadant was called upon for an answer, and said that their method was to keep adding more room, without removing any of the honey, until the crop was all in, except in extraordinary rich seasons, when the honey was ripened sooner than usual. He thought that the fact of the honey being sealed was not evidence of its being ripe, as bees sometimes were in such a hurry to cap their honey, that they did not wait until it was all ripe; and that very often the cappings burst in consequence of the fermentation that would take place. If he had honey that was unripe he would evaporate it slowly *au bain-marie*, that is, over hot water. In his opinion it was mainly the heat, together with a current of air forced through the hive, that caused unripe honey to evaporate, and the nearer we get to it unartificially, the better. He knew that honey could be preserved, of good flavor, by evaporating it slowly by heat; and he preferred that method to the methods advised by others, of allowing it to stand for months in open vessels—which method could not be practiced by extensive bee-keepers.

Dr. Jesse Oren said: W. S. Hart, of Florida, extracts every day, and runs his honey in a long trough that is exposed to the sun. The honey goes in at one end, and comes out *thick* at the other.

A. I. Root—Prevention is better than cure; but when you have unripe honey on your hands, it is better to let it granulate and pour off the liquid part of it. If you wish to evaporate it, take the heads off the barrels and cover them with strainer cloth. The thick honey will settle to the bottom, when it begins to granulate.

R. McKnight described his apparatus for liquefying granulated honey, and to cure unripe honey. It was a double-can, to place upon a stove, with water in the outside can, and a faucet running through both cans, to draw off the honey. Heat the honey in this way, as Mr. Dadant suggested, then seal it while hot. This not only cured the honey, but prevented further granulation. A Mason-jar-full was put upon a wall out-of-doors, and allowed to remain there during a whole severe Canadian winter, without showing a trace of granulation. Honey could also be cured satisfactorily by putting it in a tin tank, in a hot room, the heat of which helped the thick parts to separate from the watery portions, and to settle to the bottom, while the water remained at the top, so that there were about three inches of sweet water in one of these pans, that could be drawn off and used for vinegar making. In his opinion, however, the easiest and best way to cure honey was by heating, as stated by Mr. Dadant.

REPORTS OF AFFILIATED ASSOCIATIONS.

The condensed reports of Affiliated Associations were then heard. They showed that the honey crop was very much less than usual, and the prospect rather poor. In many localities bees had to be fed, in order to secure sufficient winter stores.

MORNING SESSION—OCT. 30.

After the President called the Convention to order, Dr. Miller was requested to sing the well-known "busy-bee" song, which he did in his usually lively manner. After the song, which was cheered by all, a resolution was passed, upon the motion of Dr. Mason, thanking C. C. Miller and Eugene Secor, the authors of the bee-keepers' songs, on behalf of the bee-keeping fraternity.

INCORPORATION.

The committee appointed to consider the points involved in the President's address, recommended the appointment of a committee of three members, to perfect the organization of this Association, and to incorporate it under the law.

W. F. Clarke saw the wisdom of a State or Provincial organization, but objected to the Incorporation of this Association, on the plea that it would affect its International character, as he could not see that it could be made legal with the two Governments.

Thomas G. Newman said that it was very desirable to incorporate the Association. He thought that it was the lack of organization that had kept the Association from growing, as it should grow. If it was well organized, the membership would be continuous, and the annual fees would be paid by all. Now, owing to the general failure of support from non-attending bee-keepers, the annual meetings were mostly local. He saw no difficulty in incorporating the Society in any one State or Province. He said that he belonged to another organization which was incorporated in the State of Massachusetts, and it now had a membership of 63,000, which included every State in the United States, and Province in Canada; the Sandwich Islands and Mexico. It had sub-organizations in nearly every State in the Union, and the Provinces of Canada. He thought that the incorporation would make the Association legal, and would greatly help it, without hindering it in any manner. Nearly all the members, instead of being transient, would be permanent, from year to year; but, of course, many annual members would join only for the single year, as now.

A committee was finally appointed for this purpose, composed of Messrs. Mason, Newman and Secor.

Dr. C. C. Miller then read his essay, "What I Don't Know about Bee-Keeping," which elicited much laughter; and the words so often repeated by him in his essay, "I don't know," became by-words during the remainder of the session.

What I don't Know about Bee-Keeping.

I don't know why the secretary should single me out to make an open display of my ignorance about bee-keeping—unless it be from natural spitefulness on his part.

I don't know that I can tell all that I don't know. It would take all the time of the Convention. I'll just mention a few points.

I don't know how far apart bees naturally space their combs. The only chance I have lately had to measure, gave eight spaces in eleven inches, right through the brood-nest, the spaces varying from 1¼ inches to 1½ inches. As the combs approached the outer edges they spread farther apart, reaching in one case 1¾ inches. One man, in whom I have confidence, says 1¼ is the average, while another says 1⅜. I don't know.

I don't know whether the greater loss in wintering out-doors, in a climate like mine, may not be made up by greater vigor as compared with those wintered in a cellar.

I don't know whether successive poor years are to be considered a permanent thing, or whether we may again expect crops as of old.

I don't know why prices, this year, don't rise to correspond with scarcity.

I don't know whether it will be a good thing to hold our annual meetings anywhere, or at any time, when we cannot get reduced rates, as the result of some other undertaking at the same time.

I don't know that there is need of any more bee periodicals.

I don't know whether it is best to replace queens of a certain age, or leave it all to the bees.

I don't know how a bee-keeper, with plenty of bees to stock his field, can prevent some one else from planting an apiary right beside him—thus spoiling the field for both.

I don't know, for certain, how to prevent brace-combs.

I don't know of anything that will pay to plant for honey alone.

I don't know whether new developments may not oblige me to go back to the antiquated and long-ago-condemned plan of using fixed frames.

I don't know—and I don't know who does know—how to prevent swarming. I don't know what causes swarming—don't know near as much about it as I did years ago; and if I did know all about the cause. I don't know that I could prevent it.

I don't know that we'll ever get anything settled in bee-keeping—settled to stay, so we'll not have to change our fixtures or plans.

I don't know near as much as what I don't know.

I don't know—I don't know. but I'll stop. C. C. MILLER.

W. F. Clarke said. I do not know what is the natural space between combs. In many instances the bees build crooked combs, and the spacing is very irregular. They seem to have no rule whatever in spacing the combs.

S. A. Shuck—Dr. Miller, sometime ago, called for statements in the bee-papers on this question. Mr. Doolittle gave a rule which contradicted my experience, but I feel certain that there is no fixed and invariable distance between combs, in a natural condition.

B. Taylor said : In 1856 I took great interest in hives and fixtures, and as it was of great importance to know the distance from comb to comb, in transferring, I measured a great many hives, and came to the conclusion that 1½ inches was the nearest average to Nature. I mean, the distance of brood-combs from center to center. I am sure that the distance is greater for surplus combs, as the outside combs are always built farther apart. I have used both 1½ and 1⅜ inches, and consider 1½ the standard.

J. C. Stewart said that he had found the proper measurement at the top of the frames to be 1½ inches. In large hives, the average measurement is not far from 1½ inches. Away from the brood-nest, the combs are more irregular and thicker.

A. I. Root said he had figured on it, years ago. Lately, he thought he had heard some one state that combs could be placed 1¼ inches apart, from center to center, and that the brood would hatch and the work go on as usual. Some thought that was sufficient room, but he doubted it very much, and did not think the bees were at ease on so short a space.

E. R. Root supported the 1⅜ inch distance, and said that the average found in Nature was 1½ inches for brood and surplus combs, when taken altogether. He thought that the bees would put more brood and less honey in the brood-nest, if they were only 1⅜ inches apart. He found that naturally-built combs were spaced all the way from 1⅜ to 2½ inches, but thought that the preference of bees in a natural state was 1½ inches.

Wm. Lyon had experimented considerably on this matter, and found that it was a good plan, at the opening of the season, to move the frames closer together, as near as one and five-sixteenths from center to center, to prevent the storing of too much honey in the brood-chamber. He found that this narrowing up of the space would drive the bees into the sections better than anything that he had ever tried. He was in the habit of moving his frames together every Spring, and of moving them apart again in the Fall, so that the combs would get sufficient honey for winter stores, and the bees could get more room between the brood-combs, to cluster. He attributed his success in getting bees into the sections to this method, which he had followed for a number of years.

R. L. Taylor asked : In a ten-frame hive, what plan do you follow ? Do you add a dummy when bringing the frames together ?

Wm. Lyon said : I add a dummy, or another frame, as the case may require. I have almost done away with swarming by this method, as it drives the bees into the sections at the beginning of the honey crop. I use the George Bischoff frame, which is 9x15½ inches.

Dr. Mason thought that Dr. Miller was the proper man for that essay, as he had noticed that in the answers to questions in the bee-papers, when looking for Dr. Miller's answers, he found that he failed to give an answer—very often — probably because "did not know." He stated that he used 8 frames in a 12-inch hive; and sometimes even 9 frames, and thought that the bees had a plenty of room with 1⅜, and did not have to push one another around, to get by. He thought that with 1¼ inches, the bees would more likely get brood in the whole frames, as Mr. Lyon had said.

J. M. Hambaugh believed in having combs spaced at the bottom, the same as at the top.

Dr. Miller said that new worker comb is ⅞ of an inch thick ; old comb is one inch, the average being fifteen-sixteenths of an inch—the capping of the cell is probably one-sixteenth, leaving just ¼ of an inch in a 1¼ inch spacing. A bee occupies three-sixteenths of an inch, so that it would take six-sixteenths instead of four-sixteenths to allow two bees to pass one another on two combs, placed against one another. Besides, it is very difficult when placing combs, to have the spacing very exact ; mine is not. I have had combs with cells unused, being too short, and, in some cases, I have had whole patches gnawed down by the bees, owing to the want of space. Mr. Doolittle drove me to believe that we should have a little more than 1⅜ inches.

A. N. Draper said that he had hives 12 inches wide, and put 9 frames in them, and piled them up three stories high, and thought the bees remained in the lower story more readily than when the frames were further apart.

L. C. Axtell said : In Illinois, we have rich, mellow soil, in which the hives settle readily under the weight of honey, and I often find hives settled out of plumb, and the outside combs swayed and touched each other, when the bees would gnaw them down to make room. For this reason, he would not use frames less than 1⅜ inches apart. In practice, he gave them a little over 1⅜ inches.

J. M. Hambaugh—We should look to the large producers for their views in this matter. Since the large Eastern producers have been interviewed by E. R. Root, we would like to know what distances they use.

E. R. Root said that Mr. Hoffman uses 1⅜ inches ; Mr. Elwood uses 1½ inches. He said he had never tried 1⅜ inches, he might prefer it if he was to try it. In many cases they discard 1½ for 1⅜ inches, because they get more brood and less honey in the brood-chamber.

B. Taylor said that he did not approve of moving frames further and nearer in the Spring and Fall, unless one had a small apiary like Mr. Lyon's; but he thought an extensive apiarist should use the 1⅜ inch space.

W. F. Clarke wanted to know whether one had ever found a hive of bees, in a natural state, with the frames all regularly distanced. He thought that the wavy shape of the combs, in natural circumstances, was for the purpose of giving more room for the bees to cluster in the winter. He had visited L. C. Root's cellar, and had found bees hanging in clusters through holes in the bottom-board, showing how fond they are of clustering in small spaces, in the winter. He did not believe in crowding the brood-combs together at any time.

William Lyon, in answer to B Taylor, said that it was those who had small apiaries that could make the most careful experiments, as the large producers had no time to give to experimenting, and for that reason he thought that those who kept bees for pleasure, like himself, could best see the advantages of those manipulations. He did not advise any large producer to change the spaces every Spring and Fall, but he knew that for a bee-keeper like himself, there was a great advantage in it. He thought that his way would be the very way for Mr. Clarke to follow. He never had found any trouble or objection to his method.

J. M. Hambaugh said that what the specialist wanted was, how to produce the most honey, and that a bee-keeper who spent all his time with bees must keep a large number of bees. Therefore, as 1½ inches was considered a better space for winter, owing to its giving more room for the bees to place their honey and to cluster, he thought that distance was the proper distance for practical bee-keepers.

At this point the discussion was interrupted by the President, who said that the time alloted to this subject was up, and stated that the Business-Mens' Association at Hamilton, had sent a delegation to the Convention, to offer to transport those of the bee-keepers who desire it, to the establishment of the Dadants, at any time they might select. The offer was enthusiastically accepted, and it was unanimously decided that the Convention would adjourn at noon of the last day, for the proposed trip.

The Rev. W. F. Clarke then read the following on

The International Bee-Association—Its Past and its Future.

After having, somewhat rashly, assented to the request of our worthy Secretary, that I would speak on this topic, I began to consider what I would say. I ought to have done this before committing myself to the task. But I did not. So the next best thing possible, was to do it afterwards.

When I had fairly got on my thinking cap, I made a study of the Secretary's letter. It was not a strictly official, or business document. There was a vein of fun in it. I was to be very brief. The reason assigned was, lest I might tire out our good friend Dr. Miller, who was of the opinion that I was inclined to be long-winded. Well, I dare say he is right. He ought to know. "It takes a thief to catch a thief," at least so an old proverb says. The man who could reel off—what was it?—seventeen consecutive articles on out-apiaries (?) must be able, especially if he is a Doctor, to give a correct diagnosis of long-windedness.

The Secretary further said he had put me last on the programme, so that if Dr. Miller got tired, he could go home. I concluded that the idea was, that if the Doctor did not leave until the last item in the programme was reached, the meeting would not lose much of his valuable aid. What I would lose in lacking the inspiration of his presence, and what he would lose through not hearing my eloquent words, did not enter into the Secretary's calculations at all. Well, I thought it all very funny, and had a hearty laugh over it, as you are doing now.

I shall not treat the first part of my theme historically. That has been done by an abler hand than mine, and we all owe a great debt of gratitude to our friend, Thomas G. Newman, for having rescued the early records of our Association from oblivion, and collected them in the admirable little compend which records our annals from the first meeting until the ever-memorable one, held in Detroit, in December, 1885. He has laid us under further obligations by continuing his historical labors up to date. I shall take the liberty of expressing the thanks of this Convention for these and many other services rendered to the interests of bee-keeping by Mr. Newman.

Prof. Cook, though a much younger man than I am, was the father of this Association. He was not present at the birth of his child, but I was, and I can testify that it was legitimately born, and was a fine, lusty youngster at the start.

May I just whisper that the hibernation theory had the same parentage. I was nurse to the first-named child, and I am foster-father to the second. Both have had the usual maladies incident to infancy and childhood, but both have survived, and are "alive and kicking" to this day.

We owe as many thanks to the father of this Association as we do to its historian, for he was not only the author of its being, but has helped, as much as any one else, to make its history. All honor to him!—and "more power to his elbow!"

I wish to say a little in regard to what this Association has accomplished. Its first good work was to elevate Father Langstroth to that pedestal of honorable distinction which was his well-deserved place. At the outset of this organization, an attempt was made to start a rival Association. The ring-leaders in the movement were men who were not only trying to rob Father Langstroth of his legal rights, but of his good name. They were decisively check-mated in a very simple manner. This Association had already elected Father Langstroth its first President, thus doing him honor, and themselves more. When the convention for the formation of a rival body met, enough of us who knew Father Langstroth's worth, and were impartially interested in bee-keeping, attended it to elect the "Grand Old Man" President of the rival organization too. We also carried a resolution to adjourn to the same time and place as had been designated by this Association, and to take steps to make the twain one. The marriage was happily effected, and proved an end of all strife.

The Presidency of the joint Association honestly fell to the next in rightful succession, the late Moses Quinby. I do not use the language of cant when I add, "of blessed memory." The highest authority declares that "the memory of the just is blessed," and if there was ever a just man on this earth, Moses Quinby was one. His services to bee-keeping were only second to those of Rev. L. L. Langstroth, and I drop to-day on his too early grave—what shall it be?—a sprig of evergreen, or a spray of golden-rod?—*let it be both.*

This Association not only proclaimed to the world what a high place Father Langstroth occupied in the esteem and love of all honest bee-keepers on this great continent of North America, but it has been the means of doing something toward making his old age a little more comfortable. It has shown its regard and sympathy by deeds as well as words. The purses of most bee-keepers are far from plethoric, and recent years have not been prosperous and profitable ones for this pursuit, but our venerable friend and father will not measure our love by the magnitude—I should more properly say, the smallness of our gifts. If our purses were as full of money as our hearts are of gratitude and affection, he would yet die a rich man, as he ought to do, and would, if he had his just belongings.

I must emphasize the influence this body has had in keeping reputable bee-keepers at the front. Men who had selfish schemes to promote—axes to grind for their own special benefit—have not dared to face the honest daylight in which this Convention has always lived, moved and had its being. The quacks and charlatans of bee-keeping have known enough to keep away from scenes where exposure was imminent, if not certain. Bee-keepers who had real and valuable improvements to propose, were not afraid to bring them here, and we have always had a more or less extensive display of really good apiarian requisites.

At the outset of this organization, we had moth-traps and multitudinous other gim-cracks of the apiary, that we never hear of now. The thorough sifting of all matters connected with our pursuit at these meetings, has disposed of a vast amount of rubbish. There has been a furnace-fire constantly a-going, which has purged away the dross, and left the precious metals.

Our conventions have been models of propriety and courtesy; we have had free discussion without personality or bitterness; many life-long friendships have been formed and fostered at our gatherings, and I do not know of any ill-feeling that rankles among us. Having the misfortune, or the good luck, to be a blunt John Bull, I have sometimes opened my mouth and put my foot in it; but it has never been with any anger or spite. I do not think of a single bee-keeper to whom I am not ready to say in the words of Gerald Massey:

"Give me your hand, you shall, you must,
I love you as a brother!"

except the lady bee-keepers, and, of course, the brothers embrace the sisters, in comprehension, and otherwise.

I want to say here, though I hesitate to speak of it on grounds of delicacy, that though this Association did not make our friend A. I. Root a bee-keeper, yet it was one of the agencies; and if I am not mistaken, the first, that operated to make him a good Christian man.

We all believe, however much we may differ from him on some points, that he is trying to do all the good he can in the realm of apiculture, and in other and higher spheres of usefulness. I try his patience and forbearance, especially when he sees me taking a quiet smoke; he tries mine in other ways, but all the same, he has not a more true friend, admirer and well-wisher, than myself, notwithstanding he holds me up once a fortnight in his tobacco column, as a great, big sinner!

It goes without saying, that this Association has done much to advance the interests of bee-keeping by means of the excellent papers, discussions thereon, and the publication of its proceedings in the bee-periodicals, especially in the AMERICAN BEE JOURNAL, which has always been foremost in giving prompt and full reports. These have been scattered far and wide, among bee-keepers, and have exerted a mighty leavening and educating influence throughout this continent and in all lands where apiculture exists.

But I am getting "long-winded" after all. Still my friend and critic, Dr. Miller, has not left. He is probably staying to prove the correctness of his professional diagnosis as to the condition of my lungs. However, I am going to stop—really—soon—"Honest Injun!"

As a preacher, I never try to exhaust my text, but only to set people thinking about it. The true function of a public discourse is to lay down a track of thought along which the hearers may travel at will. Now you can all think of many more good things in the past of this Association than I have enumerated. Add the sum total of it all together, and there will be ample proof that its life has been worth living, and consequently deserves to be perpetuated.

I have only one word more to say about the future of this Association. It needs to assume a more representative character. All along, during the course of its history, we have tried to give it this feature. The only defect in this meeting has been that there were so few "wise men from the East" here. The distance is too great for many whose hearts have been with us, to bear the expense of the journey.

I say frankly, that but for the generous kindness of my fellow-members of the Ontario Bee-Keepers' Assocation, I should have been absent—no great loss, perhaps, except to myself. But I want to hold up the body I represent as an example in this respect. We are going to send at least one delegate every year, and pay his expenses, even if the Association meets as far away as California. I think I may venture to tell you, as a little "tale out of school," that hereafter, when a bee-keeper fills the presidential chair among us for a year, he will not "step down and out," but will be invited to step up and out, by being appointed our delegate to this Convention. Is not this an idea worth adoption, at least, by every State, provincial, and territorial association? I think it is, and I would express the hope, in closing, that this body, while retaining all the good qualities it has had in the past, will, in the future, be more thoroughly and largely representative of the bee-keeping fraternity, and in all parts of North America. W. F. CLARKE.

Mrs. Harrison asked: Is there never to be any chance for us to meet ladies as Delegates from Ontario?

W. F. Clarke—Certainly. Canada is not behind the United States on Women's Rights.

Dr. Miller—It is evident that Mr. Clarke meant to "embrace the ladies" in his essay.

Thomas G. Newman said that he desired to impress one point in the address of Mr. Clarke. In order to make this Association truly representative, in fact as well as in name, it is necessary that all the local, State and Territorial Associations should send Delegates to every Convention. We want to see the Society extend even as as far as California, and have Representatives of that large honey-producing country attend our meetings. But in order to do so, they must come as Representatives, and their expenses be paid by the Societies. No one individual could afford the outlay for himself alone. But for the many, it was easily accomplished. Able Representatives would be willing to give their time to attend these assemblies, but all Representatives should have their expenses paid by the local Societies. This is contemplated by the Constitution.

Under the head of "Voluntary Contributions," the following essay, written by Allen Pringle, President of the Ontario Bee-Keepers' Association, was read, but the discussion of the topic was postponed until the afternoon session.

Foul Brood.

The Ontario Bee-Keepers' Association has, I believe, two or three accredited representatives at this Convention, though but one with portfolio. But as the present membership of our Society would entitle us to a dozen or more delegates, this communication from me will not, I hope, be any encroachment on the time, business, or patience of the meeting. At any rate the paramount importance of the subject I wish to bring before you must be at once my justification and apology.

On looking over the programme for this International Convention of bee-keepers, I am not a little surprised to find that THE question most vital to them to-day has no place there. I therefore propose to step in under cover of "Volunteer Contributions," and fill the gap thus left open.

The question I refer to as being the most serious and difficult one confronting the apiarist to-day is the "Foul-Brood" question.

The other prime difficulties in bee-culture have been removed—the largest obstacles surmounted. The winter problem is solved; the "spring-swindling" problem is solved; the evolution of the "best bee" is well under way; while a host of other minor matters have been resolved into a multitude of solutions to suit this bee-keeper, that one, and the other one.

The foul-brood problem has stood the longest—a defiance to our heads and a menace to our pockets. But it, too, has been *practically* solved, though still hot in theoretical dispute. But one good fact, rightly interpreted, ought to kill a dozen dubious, opposing theories. I remember writing, when at school, from this copy: "Theory is worth but little, unless it can explain its own phenomena"—and the idea has been useful to me. Whatever the theories of foul-brood presented, and whatever the drugopathic remedies proposed and predicated thereon, I undertake to say here, that we, in Canada, have practically solved the problem of cure, during the past season.

As soon as I became satisfied of this, I sought to convince our big cousin over there of the important fact, but apparently with poor success—that is, so far as the periodicals and professionals are concerned. I wrote to the two leading American bee-periodicals on the subject, sending a copy of our "Foul-Brood Bulletin" to each, and suggesting that they give their readers the benefit of its contents. The contents, however, did not appear, though, of course, my own letters did.

Our inspector (before his appointment, however), wrote out his method of successfully treating foul-brood, and sent it to another American periodical, that number of which was to be wholly taken up with the foul-brood subject. This communication did not appear, it contained a great truth, and perhaps more valuable information for those scourged with the foul-brood, than all else that appeared in that number.

Now, "brethering," (I mean ye three editors, and doubtless all present), please bear in mind that this is not meant for an attack on you or your periodicals. I attack "brother Jonathan," for I suspect he is to blame. That tremenduously big brother of ours, armed with the "McKinley Bill," is just now straightening himself up in our presence and giving us a withering glance—"on the slant." These "sovereign" citizens of his have no doubt caught the infection, and naturally enough imagine that "no good thing can come out of Nazareth," or Canada.

Be that as it may, I repeat and reiterate, for the benefit of whom it may concern, that we have practically solved the foul-brood question in Canada—that is, so far as its successful treatment is concerned, and that, of course, is the main point; and we shall charge you nothing for the information of how it was done. Though you may be unwilling to import the "furrin" article without a tariff or McKinley-tax, we shall nevertheless smuggle it in to you by "Her Majesty's mail" and "Uncle Sam's post."

By this little digression we mean nothing amiss. It is only a friendly return of harmless banter which I sometimes observe coming over here, from down there. Nor do we mean to boast over our achievement in apicultural therapeutics. Our determination to give you this information how to cure foul-brood does not arise from that motive. On the other hand the motive may not be wholly benevolent or disinterested. There may be a trifle of selfishness about it, but of a kind beneficial to you as well as ourselves.

The matter stands thus; Foul-brood has been and is scourging bee-keepers everywhere in the Eastern Continent, as well as this, and to an extent not generally known. We, in Ontario, have undertaken to grapple with it, and overcome it. We are successfully accomplishing the task, and we want our nearest neighbors "over there" to do the same, not only for their own benefit, but that they may not injure us. You will now perceive that our motive is both egotistic and altruistic, but for the ultimate good of both countres. In view of the fact that there is considerable interchange of bees and honey between the two countries, our solicitude is not unnatural or unreasonable.

We intend to stamp out the pest here, and we offer you the advice to do the same there, and the instructions how to do it. Though the "great guns" and the *tribunes* may be too high to look toward Nazareth, the poor sufferers are not, of which fact I have had ample evidence lately; and this is the chief reason why I write this letter to the International Convention of bee-keepers. Since my letters, above referred to, appeared in the AMERICAN BEE JOURNAL and *Gleanings*, I have had many inquiries from different States of the Union, and applications for our Foul-Brood pamphlet. I responded to all, though the work was considerable.

To cover this ground, and meet this want, I shall here give in concise form the desired information—*how to cure foul-brood among the bees*—in a simple, hygienic manner, without the aid of drug or druggist, and outside of, as well as during the honey season. Of course, during a honey flow is the best time for operating.

In the evening, remove the bees and queen from the diseased colony, and place them in a clean hive, with foundation-starters. Four days afterwards take away all frames of comb and starters from them, and give them full sheets of foundation, or empty comb which you know to be free from the taint of disease. The colony is now cured, and will rear brood, healthy and free from the disease, until contracted again through the ingathering of diseased honey, or otherwise. The honey is the chief, if not the only, medium of the contagion, and one drop of affected honey brought into a healthy colony, if used for larval food, is sufficient to start the disease.

This is a very important fact, constantly to be borne in mind, in order to prevent the spread of the disease. The diseased honey may be rendered innocuous by boiling, and the combs by rendering into wax, the dross to be buried.

To save the healthy part of the brood taken from diseased colonies, fill empty hives from the frames of brood, and close the entrances securely for two or three days, attending to warmth if the weather is cool, and to ventilation should it be hot. Then open the entrance; and as soon as the healthy brood is all hatched, put the young bees through exactly the same process as the old ones, described above, give them a queen or a cell, and they, too, are cured. All the honey taken from both the old and young colony, must be boiled before it is given to the bees, and all the combs melted into wax.

To cure a foul-broody colony in the Fall, after the honey season is over, remove the bees and queen from their hive and place them in a clean hive, with as many frames of healthy, sealed honey, or syrup, as may be required for winter. The combs must be *completely* filled and *sealed* so that the bees will retain the diseased honey they may bring with them, until it is disgested, instead of depositing it in the combs, and so that the queen may have no place to deposit eggs until all the danger is past.

This is the simple plan of curing foul brood followed by Mr. McEvoy, our inspector, and is invariably successful. He has treated hundreds of cases during the past season, without a single failure. Since he began his official work, in May last, under our Act, he has examined nearly a hundred apiaries and a thousand colonies. Many whole apiaries that were fairly rotten with the disease, are now perfectly sound and healthy.

By the method given, any and every form and stage of the disease, from the simplest to the most malignant, may be cured. The proof of this, in its amplitude, is before us; and this is why I say, and say again, that so far as the cure of foul-brood is concerned, we have practically solved the problem here in Canada, this year.

This is reason enough for my persistency in pressing the matter on your attention, for I have not the slightest doubt that when the truth becomes known to you, as it is now known to us, the disease will be found to be as prevalent there as it is, or was, here. Little did I suspect its wide extent and fatal ravages, until the machinery of the law disclosed the facts.

We now ask you to follow our example in this wholesome remedial work. What did we do and have we done? At the risk of unduly lengthening out this epistle to the modern Gentiles, I shall summarize that work, though it may be a repetition of what I have previously written to the bee-periodocals.

At our last annual meeting, the fact was disclosed that foul-brood existed, and was making rapid headway in sections of this Province. We at once took steps to secure the requisite Legislation to aid us in its suppression. We went to work with a will, and within the short space of three months the fruit of our endeavor was an "Act for the Suppression of Foul Brood Among Bees," passed by our Provincial Legislature. The working of this Act so far goes to prove that it is the best of its kind in existence, of which we have any knowledge.

Under its provisions our Association annually appoints a Foul Brood Inspector and Sub-Inspector, paid by the Government, whose duty it is to go wherever the Society directs them, and inspect apiaries, with full power either to treat the diseased colonies, or destroy them when necessary.

Under its provisions, resisting the inspector in the discharge of his duties is a penal offence. Exposing diseased honey, comb, or other article, is a penal offence. Selling diseased bees is a penal offence; also other acts conducive to the spread of the disease and inimical to the public interests.

We have also a pamphlet on the subject, embracing a copy of the Act, modes of treatment, etc., which we induced the Government to issue as an official "Bulletin" under the Department of Agriculture. This pamphlet is printed in English and German, and has been distributed among seven to eight thousand Ontario bee-keepers. "Go thou and do likewise." ALLEN PRINGLE.

Selby, Ont.

(Concluded next week.)

SELECTIONS FROM OUR LETTER BOX

Doubling up Colonies.

I started in the Spriug with 24 colonies of bees, which I increased to 32. I took off about 900 pounds of white clover honey, and about 100 pounds of Fall honey; 1,000 pounds in all, of comb honey. From what I can learn from the bee-keepers of Moultrie county, I obtained as much, or more, merchantable honey as all of them together; I think, owing to the doubling up system that I have adopted the last two years. ALEX. ROSE.

Sullivan, Ills., Nov. 5, 1890.

An Aster,

Enclosed find flowers handed me this morning by Dr. W. J. Smith, a bee-keeper near here. It grows plentifully here in the Ouachita River Valley, and along creek bottom lands, and bees are working on its bloom vigorously. Now, we do not know its name, or whether it is good for honey or not. Please let us know through the BEE JOURNAL if it is any good for honey, and state its name. I write by request of Dr. Smith. Z. A. CLARK.

Arkadelphia, Ark., Oct. 29, 1890.

[It is an aster, and it is an excellent honey-producer.—ED.]

Bees Carrying Honey Below.

Some one said: In preparing bees for winter, place the bees upon not exceeding 6 frames of good honey. Of the 10 Langstroth frames in my hives, I do not find 6 well filled. I have no extractor. To get the honey transferred from the 4 frames, I placed them in the upper story, and the bees appear to me to be consuming the honey, rather than taking it below. What would have been the correct course in this case? I have been in the bee business one year, and have learned a little, and can see that there are other conquests a-head of me. While the veterans are puzzled to find a market for honey, I am seeking the honey, which is still scarce. My bees had hundreds of acres of white clover; but they gathered no honey from it. They were not ready when the honey came—they will be next time. We have buckbush, which gives the bees work all through August. By the way, this is our best honey plant; and we have golden-rod, Simpson honey-plant, sweet clover, horse-mint, smart-weed, etc. I think that success in introducing queens depends upon one's ability to distinguish an amiable from an angry bee. Mr. Doolittle can tell as soon as he places the caged queen among the bees what they think of her—but he cannot tell me how to do it, as we have to learn this by practice. October is the time for the new hand to introduce queens.

J. M. Mitchell.
Knobnoster, Mo., Oct. 18, 1890.

[If you had "scratched" the cappings of the honey, before putting it above the brood-chamber. so as to have it *leaking*, the bees would have taken and stored it below, realizing that it was being *wasted*. As it was, they concluded that it was only stores for their consumption, and they appropriated them early, before the cold weather came to prevent them from leaving the cluster—Ed.]

50 Pounds of Honey Per Colony.

My crop of honey will be about half an average. I will get 50 pounds per colony, and I think that is good for this year ; most of it is in one-pound sections, and the rest of it is extracted. My bees are in fine condition—most of them having plenty of honey to winter on. I will unite some weak ones. The new colonies are light, but there were only 4 swarms out of 60 colonies. One fine colony of Italians went to the woods, or some where else. I think I have done well for this year. We are having nice rains, and the clover looks fine, what there is of it. I think it was injured by the drouth somewhat. Corn is only half a crop, and oats the same. The wheat crop was good for this country—so, all in all, I think the bees will pay a good deal better than other crops around here. Honey is selling at wholesale at 15 cents per pound. I am holding my best in Kansas City, for 20 cents per pound. Honey is too low, for this year, but we have got into the ruts and will have to get out. The cause of that is fogyism, box-hives, etc.

John Blodget.
Empire Prairie, Mo., Oct. 17, 1890.

No Surplus Honey.

I have 10 colonies of bees, but I have to feed them for winter stores. The surplus honey was a failure in this neck-o-the-woods, this year. Only a few colonies have stores sufficient to winter on, without feeding, and lots of bee-keepers are disgusted, and say they will not do anything for the bees this fall ; and that means a lot of empty hives until Spring. So those that feed and care for their bees this Fall may reap a good harvest next year.

E. J. Fusselman.
North Jackson, O., Nov. 4, 1890.

Two Swarms on One Tree.

How many of the readers of the American Bee Journal have seen a tree with two separate colonies of bees in it. (I saw one.) They were about 15 feet apart. The tree was found by some boys, while out squirrel hunting, and they cut the tree down and took the bees out of the lower cavity, and thought that was all there was of the bees they saw going in at the two entrances. They returned home with their bees and a little honey, and did not know they had left another colony in the same tree, until they passed by it two or three days afterward, when they cut the log off, above and below, the bees, and took it home with them, and stood it up in the yard, and let them work away. They appear to be all right.

C. R. Smith.
Moorfield, Ind., Oct. 28, 1890.

Bees Must be Fed or Starve.

Bees have done very poorly here this season, and many colonies will have to be fed, or starve before spring. I have 33 colonies in fair condition.

John Norway.
Jay, Vt., Oct. 21, 1890.

Results of the Past Season.

I started in the Spring of 1890 with 19 colonies, all in good condition. The season opened up unfavorably. April and May were cold and rainy, but June, and until the middle of July, were very good. After that it turned dry until the latter part of August. During that time the bees hardly gathered enough to live on ; but after that it became better, and they are all in good condition for winter, better than I expected them to be. I increased from 19 to 30 colonies, and obtained 500 pounds of comb honey and 200 pounds of extracted honey. My extracted honey sold for 15 cents, and comb-honey for 18 cents per pound at our home market. I was the only successful bee-keeper in this vicinity. My neighboring bee-keepers did not get any honey, for they all keep the common black bees ; mine are all Italians, from queens which were reared by Mr. Doolittle.

Jacob Vanderhorst.
Minster, O., Oct. 27, 1890.

Better than Expected.

I have had better success this year than last, and better than I expected. I took two boxes from my two yielding hives. I placed one upon the other, and started for the barn, where I found my partner busy with some potatoes. I said, "Please hold these a minute," whereupon he reached up to take what he supposed to be empty boxes. He was surprised to find that one contained 13 pounds and the other 7 pounds, making a total of 20 pounds. I have now 3 good colonies, and 2 that are not in as good a condition as I should wish. I shall put the whole 5 into winter quarters, and hope to see them all alive next spring. I intend enlarging all my empty hives this winter, as I find that these are the only ones that pay out here ; and I have tried the small ones to my sorrow. The clover and golden-rod seasons were fair. Twenty pounds to a colony is considered immense out here, but I hope to show them what a colony can do. The only two apiarists near me have let their apiaries go to ruin. One had 29 colonies, and he now has about 7 ; the other had 8, and he has now only one.

O. R. Hawkins.
Bellport, N. Y., Oct. 17, 1890.

Pennyroyal.

Bee-keeping has been a failure here for several years, on account of the stockmen burning the woods each year just as pennyroyal, our main honey supply, is coming into bloom.

H. G. Burnet.
Alva, Fla., Oct. 23, 1890.

Satisfactory Increase and Crop.

I commenced the last spring with 32 colonies. They increased to 77. I lost one by moths, and 4 were robbed. Not feeling very well in June and July, from the effects of La Grippe last winter, I did not get my supers on in time to catch very much of the basswood and white clover honey flow, but my bees have done well on buckwheat, wild sunflower, golden rod, and other wild flowers, and are well stocked with winter supplies. I did not get any swarms until June 29 ; after that they seemed to be possessed with a mania to swarm. I found that I could not keep up with them, so I examined a part of the hives, and cut off all of the queen-cells, first making sure they had a queen. These colonies gathered nearly double the amount of honey, and are in good condition for winter. I do not approve of clipping the queens' wings where fowls are running, as they will pick them up. I have a bee-house 14x22 feet, and 8 feet in the clear, partially under ground, and otherwise protected from frosts. Some of my colonies came out last spring with combs quite moldy, while others were as clean as a whistle.

I. W. Kees.
Chippewa Falls, Wis., Oct. 24, 1890.

HONEY AND BEESWAX MARKET.

DENVER, Oct. 13.—We quote: 1-lbs., first grade, 16@18c. Ext, 7@8c. Beeswax, 20@25c

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb. Southern, 70c per gallon.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 8.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 3.—Nothing new in the market. Comb honey is scarce. A choice article would bring 16@17c a lb. in the shipping way. There is a good demand for extracted honey at 5½@8c a lb. on arrival. The arrivals are good.

Beeswax is in good demand at 24@26c., for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

BOSTON, Oct. 24.—Honey is selling very freely. Demand fully equal to the supply. We quote best 1-lb., 18@19c; 2-lb., 16@17c. No beeswax on hand.

BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.

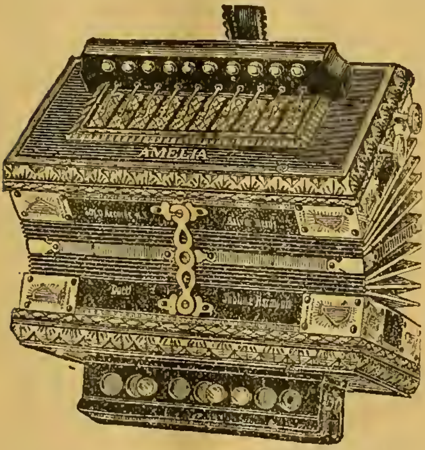
A. V. BISHOP, 142 W. Water st.

Some of Our Premiums.

Premiums are offered as pay for obtaining new subscribers, and will not be given to subscription agents or news-dealers. Each name to apply on a premium, must be accompanied by $1.00, for a year in advance, and all arrearages must be paid up, in addition to the above —only the advance subscription can apply on the Premium. Write "*For Premiums*" on every list of names sent for them, if you do not order the Premium at the same time, so that we can keep track of them. When ordering Premiums be sure to state how you want them sent, and enclose the postage, if they are to be mailed, unless we have marked them "post-paid."

Imported German Accordeon.

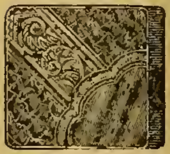
Given for Twelve Subscribers.



It has Sublime Harmonic Accompaniments, Two Sets Metaline Reeds, Duet. It is Imitation of Rosewood, Decorated in Silver, Inlaid Nickel Rings in Key-Board, Double Bellows, Nickel Clasps and Corners. Size, 12 inches long, 6 inches wide, and 10 inches deep.

This Accordeon, including an Instruction Book, will be sent by express for $4.00; not one-quarter what the Instrument is worth.

Gold-Plated Sleeve Buttons.

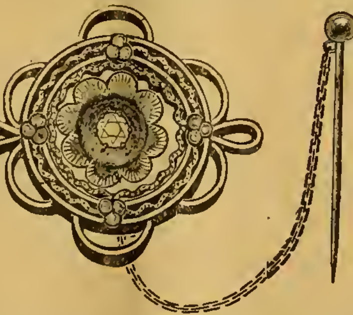


Given for Two Subscribers.

This is a pair of fine gold rolled-plate Sleeve Buttons chased, with Patent Lever backs. Price $1.00 per pair, postpaid.

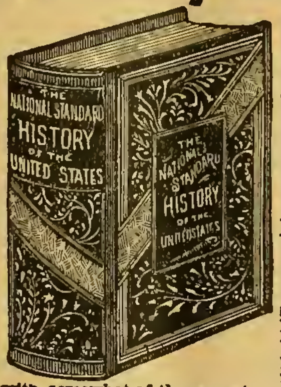
Ladies' Gold Brooch.

Given for Four Subscribers.



This is a Lady's fine rolled-plate Brooch, gold front, and Rhine stone setting. Price, $2.00, by mail.

Every One Should Have


THE NATIONAL STANDARD HISTORY OF THE UNITED STATES
THE NATIONAL STANDARD HISTORY OF THE UNITED STATES

The National Standard History of the United States. By Everit Brown. *In this most interesting book, our country's history is told from the discovery of America down to the election of Grover Cleveland as President of the United States. This book contains Sixty-seven Chapters—about 600 Pages—giving full and authentic accounts of the Norsemen, the Discoveries and Explorations of Columbus and the Cabots, Spanish, French, English and Dutch Explorations, the Landing of the Pilgrim Fathers, the Indians and their Wars, the Colonies, their Settlement and Growth, the States and their Settlement, the French and Indian Wars, the Revolution and its Battles, the Administration of each President from Washington to Grover Cleveland, the Civil War, the Record of its Battles and the Gallant Officers of the Army and Navy, the Emancipation of 4,000,000 Slaves, Reconstruction and Peace. Bound in HANDSOME CLOTH BINDING, WITH OVER*

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This book contains 600 pages and is bound in handsome cloth binding.

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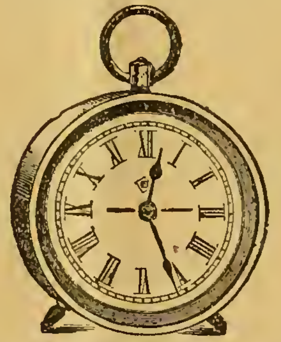
Given for Three Subscribers.

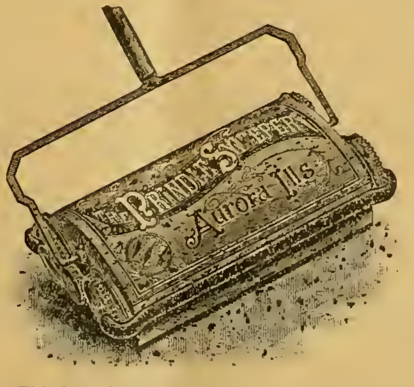


This Nickel Clock runs for a day, has a diamond movement: and the dial is 2½ inches across. Price, $1.50, postpaid.

An Alarm Clock, with dial 3½ inches, price, $2.00, postpaid, will be given for 4 subscribers.

Improved Carpet Sweeper.

Given for Ten Subscribers.



This is an improved light-running Sweeper; has a superior movable brush, noiseless gear, and practical furniture protector. It is a durable and beautiful Sweeper, costing but little more than inferior ones Price, $3 by express

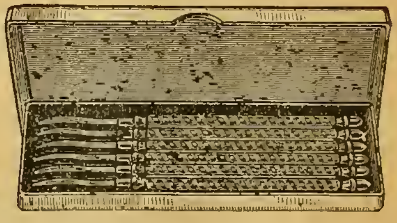
Gold-Filled Finger Ring.

Given for Two Subscribers.

This is a plain, gold-filled ring. Price, $1.00 by mail. For measure, a slip of paper that just goes around the ring finger should be sent.

Nickel-Plated Nut Picks.

Given for Two Subscribers.



These are in a case, containing 6 Nut Picks. Price, $1.00, by mail, postpaid.

Case containing 6 Nut Picks, and one Nut Cracker. Price, $2.00, by mail, postpaid; or given

Pocket Magnifier, 3 Lense

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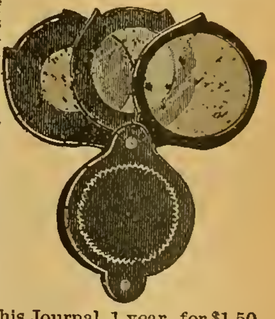

As a means of forming habits of close observation and attention, nothing is equal to this Magnifier. With it, the skin of a person's face and hand appears to be almost as rough as the hide of a rhinoceros Its powers range from 3 to 10 diameters, or from 9 to 100 times the area. Sent by mail for 80 cts.

The Lense and this Journal, 1 year, for $1.50.

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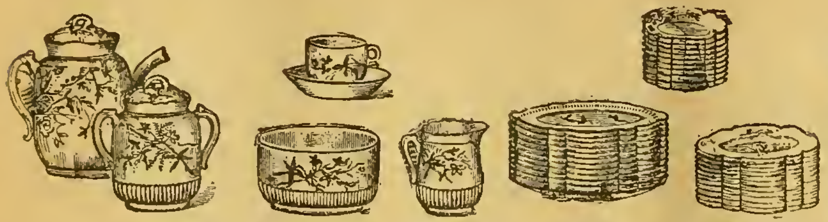
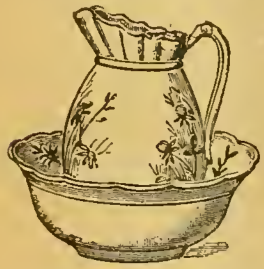
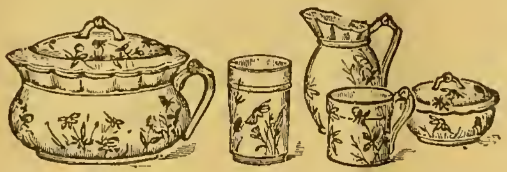


This richly-decorated Breakfast and Tea Set contains **56** pieces, modern and artistic, and makes a handsome table display The set consists of the following, 12 tea plates (usual size), 12 tea cups, handled, 12 saucers to match, a tea-pot and cover, slop bowl, bread plate, cake plate, cream pitcher, sugar bowl and cover and 12 sauce dishes. Price, $10 by express or freight, or given for 10 subscribers and $5 extra in cash.



Richly-Decorated Toilet-Set.

Given for Thirty Subscribers.



This Decorated Toilet-Set contains 10 pieces. The decorations are in colors, with gold edges and bands. They are doubly fired, and are thoroughly made and finished in every respect. Each set contains ewer or pitcher basin, covered chamber, brush vase, covered soap-dish with drainer, handled drinking mug and pitcher. Price, $7.50 by express or freight; or given for 10 subscribers with $2.50 extra.

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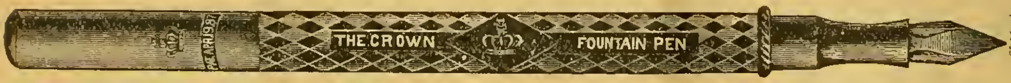
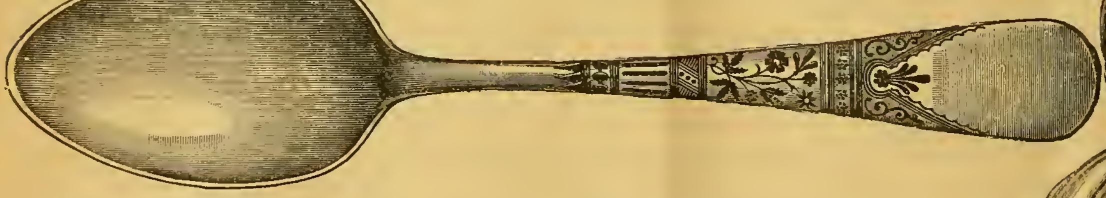


This has a best Para Rubber Holder, with No. 3 long nib, 16 Karat Gold Pen, box, filler and directions. Price, $3 00.

Silver Knives, Forks and Spoons.



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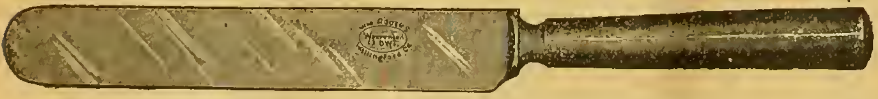

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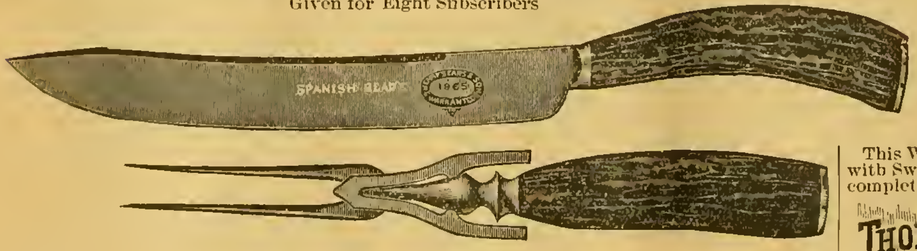
Given for Eight Subscribers



The Knife is 9 inches long, stag handle, and Spanish blade. Price, $4.00 for the set, by mail, $4.15.

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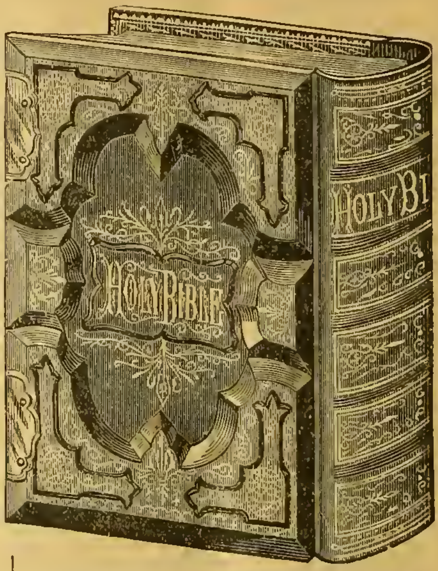

It contains besides the Books of the Old and New Testaments, Maps of the Holy Land, a variety of Tables, and a Household Directory, illustrated with a thousand or more interesting Engravings; also, a Chronological Index, a complete Concordance, Family Record, etc. Price, $7.50 by express.

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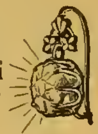

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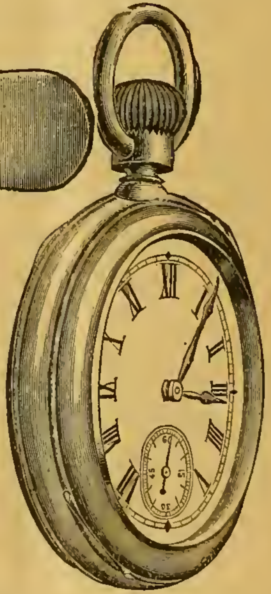

This Watch has a solid-nickel open-face case, with Swiss stem-wind movement. Price, $3.00, complete, by mail. Address,

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ESTABLISHED IN 1861

THE AMERICAN

OLDEST BEE-PAPER IN AMERICA

BEE JOURNAL

VOL. XXVI. CHICAGO, ILLS., NOVEMBER 22, 1890. No. 47.

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CHICAGO, ILL.

Issued Weekly at

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At One Dollar a Year.

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Those Who Receive copies of the BEE JOURNAL, not having subscribed for it, are hereby informed that it is sent as a *Trial Trip*, and they will incur no financial responsibility in taking and reading it. We hope they will like it so well as to subscribe for it for 1891, and get all the rest of this year's numbers *free*. This paragraph will be marked with a *Blue*, on the first of the four Trial Trip numbers.

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We will take Canadian paper money for subscription or books ; and Canadian postage stamps may be sent for fractions of a dollar.

Do not Write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter. Both may be sent in one envelope, but must be on separate pieces of paper.

Never Send Silver in letters. It will wear holes in the envelope, or may be stolen.

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We will Present a Binder for the BEE JOURNAL, to any one sending three subscriptions to the BEE JOURNAL—with $3.00—direct to us.

Advertisements for the next BEE JOURNAL must reach this office by the Saturday of the previous week.

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A Beautiful, 36-page Monthly for the

FAMILY AND FIRESIDE.

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(For November) and the **Christmas Number** (for December) will be sent free to all New Subscribers for 1891, until the November edition of 10,000 is exhausted.

The Bee Journal and Home Journal (both $1.50) will be clubbed together for one year for $1.35. Read the following contents of the November Number:

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THOMAS G. NEWMAN & SON, 246 East Madison St., Chicago, Ills.

WHAT THEY SAY ABOUT IT.

Mrs. L. Harrison, of Peoria, Ills., records her opinion in this language: "Many sample copies of various publications find their way to our desk, and soon are nestling in the waste-basket; but when the ILLUSTRATED HOME JOURNAL came, bearing the name of that well-known firm (Thomas G. Newman & Son), it met a very different reception. It was read and re-read, and its contents well noted, and then loaned to a neighbor. We wish it success, and predict for it a glorious future."

W. M. Barnum, of Angelica, N. Y., writes as follows: "The ILLUSTRATED HOME JOURNAL unexpectedly (but welcomly) found its way to our sanctum recently. It is a beautiful and intensely interesting Journal—well worthy of Publisher Newman's zeal. I wish it success."

J. M. Shuck, of Des Moines, Iowa, says: "The Illustrated Home Journal is a gem of the first water—appreciated as soon as seen."

James A. Green, of Dayton, Ills., expresses himself thus: "I am very much pleased with the Illustrated Home Journal. I wish and predict for it success. Interesting, instructive, typographically perfect, with ability and enterprise at the helm, it is bound to succeed."

J. M. Jenkins, of Wetumpka, Ala., writes: "The Illustrated Home Journal is received. We are all delighted with it. Success to it."

Elvin S. Armstrong, of Jerseyville, Ills., thus writes: "On behalf of 'the ladies of the household,' I would say that your ILLUSTRATED HOME JOURNAL for April came duly to hand. You should be proud of it—we are. I wish it the greatest success."

Frank A. Eaton, Bluffton, O., writes thus: "I am delighted with the Illustrated Home Journal; its contents are choice literature, and it is filled with fine instruction, which makes it true to name. Its typography and quality of paper are the best. I shall carefully preserve Volume IV, commencing with the April number, and have it bound."

Mrs. L. C. Axtell, Roseville, Ill., writes thus: "The Illustrated Home Journal is received, and I find it a Magazine of much better tone than most of our home and fireside reading; in fact I am well pleased with it."

The Rev. M. L. Williston, Chicago, Ills., writes: "The Illustrated Home Journal has come, and I admire this Centennial number greatly. You have made a rich issue of it."

H. H. Brown, Light Street, Pa., writes thus: "I received the Illustrated Home Journal for April a few days ago. It is a magazine that should be found in the homes of all who desire a paper that gives instruction, and its articles are of such a nature that they cannot help but please all who read its pages."

F. A. Snell, of Milledgeville, Ills., writes: "The ILLUSTRATED HOME JOURNAL is received and read. It is very nicely gotten up, and we are well pleased with its contents."

Dr. A. B. Mason, Auburndale, O., writes thus: "The ILLUSTRATED HOME JOURNAL is nice. The paper, typography, illustrations and matter are first-class in every respect. It will be a welcome visitor at our house. Mrs. M. and the baby have had a good time with it already. The first article, 'One Hundred Years a Nation,' is very good indeed, being like that on page 16, on 'Four More States,' full of boiled-down information."

J. M. Young, of Plattsmouth, Nebr., writes: "The ILLUSTRATED HOME JOURNAL is well-printed, and handsome. Its illustrations are very fine, and its contents are worth many times its cost. As a Magazine for the Ladies, it takes the lead."

Charles Dadant & Son, of Hamilton, Ills., write thus: "The ILLUSTRATED HOME JOURNAL is indeed very nice, and after having seen it, we want it regularly. We compliment you on its appearance."

N. W. McLain, Director of the Minnesota State Agricultural Experiment Station, St. Anthony Park, Minn., writes: "I like your magazine, the ILLUSTRATED HOME JOURNAL, and I hope you will find it very profitable."

S. W. Morrison, M. D., of Oxford, Pa., writes: "Your beautiful HOME JOURNAL is received. I take great pleasure in welcoming such a clean, healthy and instructive journal (as it is) into my home."

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Nov. 22, 1890. No. 47.

EDITORIAL BUZZINGS.

No rustling leaves upon the trees,
No zephyrs, and no pleasant breeze,
No birds, no flowers, no honey-bees—
No-vember.

Use White Clover Honey instead of sugar, when you put up fruit, make apple-butter, preserves, etc., and you will find that it is superior to granulated sugar for that purpose.

Michigan is not to be outdone for a honey crop in the past poor season. The *Saginawian* stands sponsor for this item: "John Schneider, a farmer living in Iosco county, got 12,000 pounds of honey this year from 300 colonies of bees. He sold 5,000 pounds in one shipment to Ohio, and received 12 cents per pound for it, and freight paid."

Hon. R. L. Taylor, the retiring President of the North American Bee-Keepers' Association, has just been re-elected to the Senate of the State of Michigan. His great popularity secured for him that position, even when every other Republican candidate for Senator in that State was defeated. We roomed with him at the hotel in Keokuk, and incidentally inquired how, being a candidate, he could leave home on the eve of the election. He replied that the matter gave him no uneasiness whatever.

As a presiding officer he was dignified and courteous, and kept excellent order.

The pursuit is to be congratulated upon having such a practical apiarist and able representative in the Michigan Senate. No unfavorable legislation is to be feared in that State, while he is there to guard the interests of apiculture.

Imitation Honey-Comb.—Mr. S. J. Youngman, of Lakeview, Mich., has sent us an item from the Detroit *Free Press* of Sept. 20, 1890, which stated that "an ingenious individual on Grand River avenue (Detroit) is engaged in making so perfect an imitation of honey-comb that the bees themselves are deceived by it, and eat it in winter."

The *Free Press*, of course, refers to E. B. Weed, who has been for years trying to make, of pure beeswax, full-depth cells of honey-comb, to be used in place of comb-foundation by bee-keepers, and we are glad to notice that Mr. Weed has commenced a libel-suit against the *Free Press* for $10,000.

These scribblers for the daily papers make consummate nonsense of things when they undertake to write on subjects connected with apiculture! The idea of bees *eating* comb in winter!!

Mr. Weed's invention is simply a sort of comb-foundation with deep cells, but on account of the extreme delicateness of the comb, and the care necessary to protect it in transportation, we fear it will never be of any practical value to apiarists—but time will tell.

Of one thing, however, we may be assured—it will confuse the public, and give some slight confirmation to the silly stories about "the manufacture of comb-honey," which have been going the rounds of the press. While it is of no practical use to bee-keepers, its announcement is a positive damage to the fraternity!

1664 will be the number of pages in the AMERICAN BEE JOURNAL next year—just double the number that it now contains—and all for one dollar. Bro. Hutchinson, of the *Review*, remarks as follows about it, in a recent number:

> We are pleased to note that with the beginning of the new year the AMERICAN BEE JOURNAL is to be changed to a two-column, thirty-two page paper; the same size that it was when a monthly. We think this the most desirable size for a magazine.
>
> In this connection we might mention that the price of the ILLUSTRATED HOME JOURNAL has been reduced to only *fifty cents*. It is clubbed with the AMERICAN BEE JOURNAL for only $1.35. This lowering of the price is done to secure an immense circulation which will command a large advertising patronage.

Fanny Field's Poultry Book is given for one new subscriber to the HOME JOURNAL, for a year, when accompanied with 50 cents to pay the subscription price of the same. By an oversight the printer put that notice on page 750 of the BEE JOURNAL, omitting the word "Home" before *Journal*, looking as though it referred to the BEE JOURNAL. The error is manifest.

We give it for a new yearly subscriber for the BEE JOURNAL, when accompanied with $1.00. The book alone costs 25 cents.

Next Year's Honey Crop.—According to the views of Prof. Cook, as expressed in his essay, read at the Keokuk Convention (see page 777), the prospect for a good honey crop in 1891 is excellent.

A correspondent in the *Homestead* quite agrees with Prof. Cook, and gives the following points as "favorable indications" for prosperity for bee-keepers next year. He says:

> The excessive June rains this season gave the weeds the start in that month that were left in abundance in the corn-fields, especially plenty of heart's-ease, and that, together with buckwheat, forms the best Fall bee-pasturage.
>
> The long drouth following the June rains injured the linden honey-flow, and stopped the breeding of bees, and caused them to dwindle in numbers, until, when Fall arrived, with a few cool, early nights, and some Fall rains, that put the buckwheat and heart's-ease at their best; bees then, with an instinctive energy only known to them, filled their hives with brood and honey so quickly that their work seemed like magic. Young bees, full of vigor, winter best. The old bees, in the sudden attempt to make the best of a bad season for the bee-business, wore out their wings and fell by the wayside. As a result, the hives are *full of young bees.*
>
> Since farming is developing more in the line of grass, especially clovers, there will be an increase of pasturage, and since bees have been so thoroughly Italianized, the widespread sowing of clovers will extend pasturage from linden to Fall wild-flower season.
>
> All these facts point to a successful honey year in 1891. So do not neglect your bees. Take care of them now, and have something more than empty hives in the Spring.

"Canadians are not Americans," said Mr. Clarke at the Keokuk Convention. What are they then? Those whose home is located anywhere on this whole Continent, are Americans—that, surely, includes Canada! How silly it would be to claim that Englishmen were not Europeans! or that Egyptians were not Africans! It is equally absurd to claim that Canadians are not Americans! We want Bro. Clarke to give up that "foolish notion."

Of course it is very flattering to those who live in the United States—to even intimate that they are the only Americans! But as it is not true, they will cheerfully divide the honor with the inhabitants of other parts of this great Continent!

In the language of Gerald Massey, each on this side of the line, will reply to Bro. Clarke's couplet, in the same words—

> "Give me your hand—you shall, you must—
> I love you as a brother!"

for we are of the same stock; we speak the same language, we live on the same Continent, and heartily congratulate one another upon the proud distinction of being rightly called—AMERICANS!

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at half price. See page 783 of this paper.

THANKSGIVING.

BY EUGENE SECOR.

The threshing is over, the husking is done,
The muskrat has wisely prepared him a nest,
The squirrel his acorns has stored one by one,
The wood-chuck has gone to his long winter's rest;
The winds of November, unfriendly and cold,
Have blown the dead leaves of the fast dying year
Into eddies and heaps, where damp and the mold
Invite to decay—yes, winter is near.

The ruddy-cheeked orchard fruits, kissed by the sun,
In the days when his smiles with warmth were aglow
Are gathered, and waiting the frolic and fun
When maiden and lover shall pare them I trow.
The full-fruited year with a generous hand
Has emptied his treasures at many a door,
While health and good government throughout the land
Are causes for thanksgiving and praise evermore.

Then gather the children and friends round the board,
The feast of Thanksgiving should be one of cheer,
The very best viands the farm can afford
Should lend us their presence at least once a year.
Yes, roast the fat turkey and sirloin of beef,
And season with currant and cranberry jell,
Pile high the baked beans, it is common belief
That joy and good appetite seldom rebel.

And then there's the pudding with raisins and cream,
What joy to the heart of the youngster it brings!
His highest ambition on earth, it would seem,
Is reached when at grandma's he feasts on such things.
The coffee, too, fit for a king or a queen,
(And such we ALL are by a God-given right,)
And doughnuts that carry us back to the green
Happy days of our childhood, in memory bright.

But better than all the good things on the spread,
And better than plenty in basket and store,
Is the feast of affection—that heavenly bread,
We'd better go hungry than this to ignore.
Then may we each have at our Thanksgiving feast,
The love that binds kindred and friends here below
And remember that thankfulness may be increased
If first to God's poor ones, some kindness we show

Forest City, Iowa. —Iowa Homestead.

GLEAMS OF NEWS.

The Convention at Keokuk.

Mrs. L. Harrison, in the Orange Judd *Farmer*, has this to say about it:

The meeting was very enthusiastic and interesting, the Western States being well represented, and delegates being present from the Dominion of Canada.

More samples of honey were on exhibition, from well authenticated sources, than I ever saw collected together before. Spanish-needles grow in great profusion in the rich, moist bottom lands, of Western rivers, and the honey shown was of good body, of rich golden color, and of good flavor.

Button-ball honey is darker than Spanish-needle, of good body and flavor; as this brush grows in the water, drouth does not affect the flow of honey from this source. As the waters fall in the rivers, it puts forth new buds and blossoms. It usually blooms about July 4, but is sometimes kept back by high water, and the bloom lasts from two to six weeks; ordinarily four weeks. The blooming of these plants, during the usual summer drouths, is a good point in favor of migratory bee-keeping.

It was gratifying that so many busy, active, practical women of the West, who are bee-keepers, were present. They took an interest in all the hives and bee-keeping fixtures on exhibition, and as usual jumped to conclusions without knowing why.

Dr. C. C. Miller, of Marengo, Illinois, who is a musician and composer, as well as a practical bee-keeper, did much to enliven and relieve the monotony of the convention by his lively and humorous songs.

Eugene Secor, of Iowa, the bard of bee-keepers, is the author of several songs, designed especially to be sung at the reunions of this Society, and set to music by Dr. Miller, and they had the thanks of the Convention for their efforts.

This is what the Iowa *Homestead* says about the Convention:

The sessions were enlivened by vocal and instrumental music. Most of the songs sung were composed by its members, set to music by a member, accompanied on the piano by a member, and sung by members.

Besides the music, there were several humorous rescitations by bee-keepers. These were the *spice* of the meetings. Dr. C. C. Miller was one to whom we owed especial obligations for many pleasurable surprises.

Although reports from nearly all present were to the effect that the past season had been one of discouragement, if not entire failure, it was evident from the spirit of the Convention that bee-keepers are of a happy disposition, and able to gather many sweets from the bitter experiences of life.

The city papers characterized the Convention as being one of the best-natured and most intelligent lot of men who had visited the city for many a day.

Three sessions were held each day—morning, afternoon and evening. Many interesting papers were read, and much interesting discussion followed.

Fifty dollars was voted to Father Langstroth, who is in declining health. He is recognized as the "father of improved bee-keeping" in the United States.

The Convention adjourned at noon, the last day, to accept an invitation from the Messrs. Dadant, who live near Hamilton, Ills., to ride out to their apiary and comb-foundation factory. Teams were provided free for about fifty members, who availed themselves of the generous offer.

The Dadants are French, and they entertained the Society with genuine French hospitality. They are the largest manufacturers of comb-foundation in the world, and their product is not excelled in the world.

Albany, N. Y., was selected as the place of the next meeting, and Mr. P. H. Elwood, of New York, was elected President; Eugene Secor, of Iowa, Vice-President; C. P. Dadant, of Illinois, Secretary; and Ernest R. Root, of Ohio, Treasurer.

The Pamphlet Report of the meeting will be issued next week. It will be sent free to all members, and others can obtain it for 25 cents at this office.

◆

The "Farm-Poultry" is a 20-page monthly, published in Boston at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

QUERIES AND REPLIES.

A Swarm Returning to the Old Hive.

Written for the American Bee Journal

QUERY 739.—What is the cause of a swarm returning to the parent hive when it has a queen? A swarm issued on June 10, I caught the queen and put her into the new hive, and they all came out and went into the parent hive again. What caused it?—Mrs. B.

I do not know.—EUGENE SECOR.

I simply do not know.—J. M. HAMBAUGH.

I do not know.—P. L. VIALLON.

Dissatisfaction with their new quarters. —J. P. H. BROWN.

I cannot say what the cause was.—H. D. CUTTING.

That is hard to tell. Bees will act queerly sometimes.—C. H. DIBBERN.

No one can tell without knowing all the facts. Are you sure that some accident did not befall the queen?—M. MAHIN.

Dissatisfaction with their quarters in some way. Ten to one, it was too hot in the new hive. Always see that a swarm is well shaded.—C. C. MILLER.

They were not suited with the new hive, and they went back to get a new start for the woods.—R. L. TAYLOR.

I do not know. I surmise the queen, in trying her wings, found them unequal to the task of migrating.—A. J. COOK.

"Give us something easier." I cannot tell unless I know something of the circumstances, surroundings, hive, weather, honey-flow, etc.—MRS. L. HARRISON.

A few bees balled the queen for some reason, and the rest of the bees thinking they had lost her, returned. This is quite a common occurrence.—G. M. DOOLITTLE.

That is hard to tell. A half dozen theories might be presented, and any and all of which might be correct under some circumstances. It is not an infrequent occurrence.—JAMES HEDDON.

If a swarm has been regularly hived, it is rare for them to come out and enter the parent hive again. They generally skip for the woods, leaving the bee-keeper perplexed as to the cause.—G. L. TINKER.

I cannot give an answer to the question, as put. Bees are "funny critters" any way; and to give a reason why they do, or do not do, a certain thing, requires a far greater history than is given in the question.—J. E. POND.

A practical bee man calls that sort of thing a "freak in bees." You do not say how long they stayed in their new quarters, and what became of the queen that you put with them. Knowing the particulars of these things is very necessary in order for the expert to make an intelligent and reliable answer. I might guess that the queen was sick or old at the time of swarming, and died before the bees had marked their location, or they indulged in a "freak," as bees evidently sometimes do. —G. W. DEMAREE.

◆

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity for clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

INTERNATIONAL.

Report of the Business, Speeches and Discussions.

Written for the American Bee Journal

BY C. P. DADANT.

MORNING SESSION—Continued.

Dr. Mason offered the following report from the committee on

THE WORLD'S COLUMBIAN FAIR.

Resolved, That in view of the splendid opportunity to be offered us as bee-keepers at the coming World's Columbian Exposition, at Chicago, in 1893, to make the grandest exhibit of the products of the apiary ever made, we suggest that this Association appoint a committee of three to confer with the management of the Columbian Fair in regard to the making of suitable arrangements for such an exhibition.

We also suggest that this Association recommend some one to the World's Columbian Fair managers, and request his appointment by them as Superintendent of the Apiarian Department.

Dr. A. B. Mason, of Auburndale, O., Thomas G. Newman, of Chicago, and R. McKnight, of Ontario, were appointed a committee to perfect the necessary arrangements. Dr. A. B. Mason was recommended by the Society as a suitable Superintendent of the Apiarian Exhibit for the United States, at the World's Columbian Fair, and R. McKnight was suggested as the Superintendent of the Canadian exhibit.

MUSIC.

Dr. C. C. Miller sang a "Sneezing Song" that convulsed the delegates, and carried them back in memory to the trying days of their early loves.

AMENDMENTS TO THE CONSTITUTION.

Thomas G. Newman submitted an amendment to the Constitution of the Association, providing that the membership fee of all affiliated Societies, paid in advance shall be for the calendar year. The amendment was adopted. A resolution was passed providing that affiliation fees heretofore paid shall be considered as paying up to Jan. 1, 1892.

W. F. Clarke, of Guelph, Ontario, proposed an amendment changing the name of the Association. The present one, he said, was a misnomer. The Canadians were North Americans, but they were not Americans, and this was not an Association of "bees," but of "bee-keepers." He moved that the original name of the Association, the "North American Bee-Keepers' Association," be resumed. This amendment to the Constitution was adopted without dissent.

The committee on Organization and Incorporation was then requested to report in the evening.

AFTERNOON SESSION.

The President called the Convention to order, and stated that the discussion on the foul-brood question would be next in order.

FOUL BROOD.

L. W. Baldwin stated that he had bought a carload of honey to feed his bees, in one season (about 1,000 colonies), and about the time they generally clipped queens' wings, he found about 800 of them had foul-brood. He cured them by shaking the bees out of the hive upon sheets of foundation.

R. L. Taylor said that he would not give any combs already built to a colony that had just had foul-brood.

Wm. Lyon had considerable experience, as all the apiaries in his vicinity have had foul-brood, and he had also found it among his own bees. He had tried all the drugs, recommended in the papers, without success, and finally shook a colony into a new hive on comb-foundation, and was surprised to find them all right after that. He soon found the neighboring hives affected, however, and thought it was by bees going into the wrong hives, owing to their close proximity. He had finally succeeded in eradicating it. He had seen a case of foul-brood which he thought was caused by chilled brood, and nothing else.

C. P. Dadant—Could not that "foul-brood" have been caused, previous to the chilling of the brood, by the infection in the neighborhood?

Wm. Lyon—No; there was none in the neighborhood at that time. That colony was destroyed as soon as it was found. I burned up the frames, after rendering the wax, soaked the hive in coal-oil, and left it out for several months, exposed to the weather. I had scalded it, besides, before using it again.

L. C. Axtell—Some 16 years ago, when we had but a few bees, and many had died in the country, from the cold of winter, I bought a large number of combs from bee-men who had lost their bees, and then transferred them into my hives. There were many dead bees in the combs, and some of the combs were very dirty. Soon after beginning to use them, I found what I thought was foul brood, in some combs; all the brood died. This disappeared in warm weather. Was this foul brood?

Several answered, "No."

S. A. Shuck—This was neither more nor less than chilled brood, and I think that it must have been the same with the case mentioned by Mr. Lyon.

Wm. Lyon—I have read many descriptions of foul-brood given by the best authorities. If this was not genuine foul-brood, I never saw foul-brood at all.

A. N. Draper asked what Mr. Baldwin did with his hives.

L. W. Baldwin—I boiled them, or scalded them. In all my experience, I never saw foul-brood originate from chilled brood.

A. I. Root—Corn will not grow where there is no corn planted, and foul brood will no more grow, if not sowed, than corn would. Chilled brood is often found where foul-brood has never been.

L. W. Baldwin—In melting the honey, it should be heated very hot. I did not see the necessity of boiling hives, and thought cleaning them would do.

E. R. Root said that he had the same idea, and had tried it on 40 colonies, but soon saw that it would do no good to use the hives if not boiled out, as every one of those hives contained the disease again in six months. He said that chilled brood looked very much like foul-brood, though it did not have so strong a smell, and was not quite so "ropy." If you find foul-brood in the Fall, burn it up; but if it is discovered in the Spring, wait a while, as you may be destroying colonies needlessly, which only have chilled brood.

L. W. Baldwin had let a lot of hives stand over winter, and thought it was the cold of winter which destroyed the germs.

Wm. Lyon did not think scalding the hives alone, would do any good, unless they were previously scraped, so as to remove all wax and propolis lumps.

Dr. Mason had lost five or six hundred dollars with foul-brood. He used a large kettle to boil the frames in, and dipped the hives in the boiling water. He left them in only a minute or two; but it was sufficient.

W. F. Clarke—All this shows the importance of having a thoroughly-qualified Inspector; one who is well posted on the subject.

Dr. Oren had never seen foul-brood, but was of the opinion that, like all mushroom growths, it would originate wherever the proper conditions were found.

Dr. Miller again sung a piece from his inexhaustible store, and was much cheered and encored.

Mr. Eugene Secor then read his essay as follows:

Full Sheets of Comb Foundation vs. Starters in the Brood-Chamber, and Surplus Receptacles.

"One swallow does not make a summer." One experiment does not establish a theory—always. One season's experience is not always a safe guide for next season's operations. There are so many exceptions to the general rules of bee-keeping—exceptions made important by change of seasons, and manner of handling, that it is not safe to advise, unless one knows a good deal more than I do.

For several years I used full sheets in the brood-chamber for every swarm. Advantage: All worker-combs, and, perhaps—I am not sure—a little time was saved in filling the hive with combs. Disadvantage: Increased cost of every colony, consequent upon the high price of foundation. Honey too low to make it profitable.

Then a revelation came, and a *revolution*—backward, however. "Let the bees build their own combs," thought I. They could do it more cheaply than the mills could grind it out.

The question, whether bees, about swarming time, do not almost involuntarily secrete wax, is an interesting one, which has not been settled beyond cavil, and which may be interesting to discuss. If they do, it is argued that they will build almost, if not quite as much comb with-*out* the "back-bone" starter as with it. It is probably lighter, anyhow ---that is, contains less wax than the manufactured article---one is *comb*, the other is *wax*.

Last summer I met a practical objection to starters, however, which I had not met before. Nectar was so scarce that the bees built scarcely any comb up to the opening of basswood. That came in such sudden abundance, that some of my best colonies built almost entirely drone-comb below, in order, probably, to quickly store the product.

But if I had foreseen this result, and had provided them with full sheets, I am not sure whether they would not have gnawed it full of holes, while they were idle, and built drone-cells in the holes when the honey flow did come.

With the present high price of comb-foundation, and the low price of bees, I am somewhat doubtful of the advisability of using more than a starter in the brood-chamber. And, perhaps, if we could always have young queens, the amount of drone-comb would be so limited as to cause no serious trouble. But when it comes to working for comb-honey in sections, I am in favor of using the thinnest foundation made, and using very nearly full sheets.

I have used starters of various sizes, and like the full sheets best. The principal thing in their favor is, that the bees attach the combs to the sides and bottom, so much better, making the filled section look nicer, and better fitted for transportation. Perhaps the same thing can be attained by attaching a narrow strip in both top and bottom; but whether the saving in foundation would compensate for the increased labor, is a question for every one to settle for himself.

I think the objection sometimes urged against the use of full sheets in sections, on the ground that it will show in the honey, is not tenable—if the proper foundation is used. None but the thinnest should ever be used for this purpose. In that case, I doubt if any one can detect its presence.

For extracting-supers, I like full sheets. Then no drone-comb can be built; and if we wish to exchange a comb of honey to the brood-chamber, we are sure no worthless drones will be reared where we do not want them. It may be that it will pay to go a step further, and wire the frames—but of this I am not confident.

EUGENE SECOR.

A Member—What would Dr. Miller advise on the subject of wiring frames?

Dr. Miller—"I don't know." (Laughter.) If we wire our frames, we can have the foundation in the middle of the frame much more easily. Besides, when combs melt down by extreme heat, wiring may help.

A. I. Root wanted to hear from others whether it paid, at the present prices of foundation, to use it in full sheets. Mr. Doolittle says he can get straight, all-worker combs, without using comb-foundation.

R. L. Taylor—Mr. Doolittle uses an empty frame between two full frames to secure straight combs.

Mrs. Z. Hollingsworth—After you have good combs built on foundation, they last forever, and the wax is still there. It represents quite a good part of the cost of the foundation. It is not lost.

B. Taylor said that he had colonies with 98 per cent. of worker-comb, all built naturally, where the queens were young, of the previous season's hatching. He used starters, three cells deep, and did not wire his combs.

S. A. Shuck had contradictory experience, in a very good honey-flow, with queens one year old. The bees built too much drone-comb.

On motion of Mr. Draper, an informal vote was taken, to know how many used wires in frames with foundation. The result showed 28 yes, 25 no, and 9 who used them and thought them unnecessary,

W. F. Clarke objected to taking such votes, as the Convention was hardly expected to represent the views of the bee-keepers of the whole country.

Wm. Lyon—Large frames need wiring—small frames do not.

Dr. Miller—Even if this meeting does not represent the whole country, it will be both pleasure and profit to learn the views of the members who are present.

J. W. Bittenbender—Combs ought to be wired, where it is expected to move the bees or ship them—but not otherwise.

B. Taylor—Wires strengthen the frames that are made of rather light wood. I would always wire such.

A. I. Root called the attention of the meeting to the original question now under discussion, which is, whether or not, we should use foundation in full sheets. Heavy brood foundation is expensive, but it can be used without wires, while light foundation should be wired by all means.

L. W. Baldwin had practiced transporting bees for years, and never wired the frames. He could handle hives without wires, and did not use foundation in full sheets. His brother did.

Dr. Mason used foundation put on wires in the Given press, and thought it a comfort to have combs with wires in them.

J. M. Hambaugh thought it a comfort to have all the frames wired, as they would not break down, where the other frames would, especially in hot weather. He was strongly in favor of wiring frames.

R. McKnight never used wires, and never had combs break down. He shipped bees, on one occasion, 300 miles, and had no loss. He thought it would be a decided advantage to those who practiced shipping, to have all their frames wired.

To the question how many use full sheets in brood-frames? 30 responded yes, and 20 used only starters.

Mr. Bittenbender said he used full sheets of foundation for hives intended to be transported, and only starters for others.

B. Taylor had experimented on all this, but did not know yet what he wanted.

L. C. Axtell uses special colonies to build combs, by selecting those with young queens, when they were strong in numbers, and secured straight combs by tilting the hive forward, to an angle of 45°. After the hive was full, he would take out the combs and give them empty frames, to build again. He succeeded better, in that way than any other, in securing worker combs. He used the V-shaped top-bar, without any starters.

J. W. Bittenbender—Mr. Root asks whether it would pay to use foundation at high prices. In certain circumstances, I would rather pay $1.00 per pound than to do without it.

To the question of how many used full sheets of foundation in sections, 15 responded yes, 24 used only starters, and 11 had used full sheets, but had abandoned the practice.

After a short recess, Mr. E. R. Root read his essay on

Fixed Versus Hanging-Frames.

About the time that Mr. Heddon's divisible brood-chamber was made public, and its merits and demerits were discussed through the papers, we ordered of the inventor one of his hives. Bees were gotten into it as soon as possible; and almost every time I had occasion to go into the apiary I would manipulate that hive, try the "shake-out function," handle the separate frames, etc. While I was not particularly struck with the advantages of the divisible brood-nest, or the shake-out function, I was greatly surprised at the rapidity and ease with which these little closed end-frames could be handled.

I have, through *Gleanings*, related some of my experiences in raising bees. Whenever it came time to move an apiary I always dreaded it. Frames had to be fixed up so that they could not be shaken about, or else, without fixing, such careful driving had to be resorted to, that it usually took three or four hours to make the trip back, when it ought not to have taken over two hours. And then there was all the time spent in fixing the frames. Indeed, our President, Hon. R. L. Taylor, in convention at Columbus, Ohio, before this association, said something to this effect: "I do not see how any sane man (speaking of the hanging-frame hive), can tolerate such a rattle-box." The remark struck me at the time as being somewhat caustic; but the more I thought of it, the more I became impressed with the truth of the comparison. A hanging-frame hive is, to a certain extent, a rattle-box.

Another thing: I had trouble in getting the boys in our yards to space the frames properly. Beginners would invariably space them too near together, or too far apart. The result would be, combs bulged, and others thinned down or scooped out, as it were, on one side; and, worse than all, was the nuisance of interchanging them. Then, too, in buying up bees, a great many colonies had to be rejected because the farmer bee-keepers would not take the trouble to space their combs rightly. You may give them printed instructions, written books, and when you visit them, tell them how far to space, and yet, as a general thing, they will make poor work of it.

When I contrasted the smooth and even appearance of the little Heddon combs, and the often irregular ones of the average hanging-frames, and the inconvenience of the latter in moving, I hardly rested easy. I was well aware that a great majority of the bee-keepers—at least of the West—were using and advocating the hanging style; and it seemed to me that I should be wasting time in experimenting, or even investigating into the subject. I knew that Elwood, Hetherington, and those other mammoth bee-keepers, used closed-end frames, similar to the Heddon; that Elwood said he could handle the Quinby as rapidly as any one could the suspended Langstroth. Although I had great respect for anything coming from the pen of Mr. Elwood, the statement seemed to me utterly preposterous; and yet, when I came to handle the Heddon frames out in the yard, it did not seem so impossible after all.

I reasoned in this way: If what Mr. Elwood says is true—yes, and I might say almost all others who have used closed-end frames—is it not possible that those who are using frames not fixed are losing many advantages that might accrue immensely to their benefit by the use of fixed frames? The hanging style without fastening will not bear moving, except with careful driving, good roads, and steady horses. There are a few who have all these conditions under perfect control. What we want, then, is frames at fixed distances that will give us true combs—no burr-combs—and, perhaps, most important of all, ease of manipulation.

Without any disposition to repeat what I have already said through the journals, I will simply state, in order to bring the matter more clearly before the reader, that I personally saw Mr. Elwood, Mr. Tunicliff, Mr. Hoffman, and several other bee-keepers using fixed frames, handle them just as rapidly, and perhaps more so, than you or I can the old style suspended; and along with that they have all the other advantages that come with their use.

I believe that the bee-keepers of the West have generally thought that Elwood and Hetherington, and all their colleagues, using fixed distances, were either greatly behind the times, or else so conservative that they would not change their frame even if facts and figures were against them.

But right here just take note of this: These men with their fixed distances somehow manage to handle large apiaries with less help than ourselves. If they had a cumbersome, awkward system, they could hardly do this. On the other hand, as their method of raising honey differs only in the fact that they use fixed distances, while we do not, does not *that* fact point pretty strongly that in *this* lies the secret? Elwood manages over 1000 colonies with only two assistants, in the height of the honey season. Mr. Hoffman manages 600 colonies almost alone, though I believe he has some one to help him in the height of the season. I may be mistaken, but I do not believe they could do this were they using the hanging frames.

Were I to attempt to show just how to economize in labor, I would fail; but with the reader's indulgence, perhaps I can give an inkling. Mr. Elwood and other gentlemen have propolis like all the rest of us, and the bees stick it to the uprights or closed ends, as one may call it, coming in contact together. But to reduce this to the lowest possible amount, some, like Mr. Heddon, use some form of compression. Mr. Elwood uses the looped cord drawn up in such a way as to squeeze the frames tightly together. Others use a sort of wedge in connection with a follower. To separate the frames they use a small screw-driver, or one of A. I. Root's small ten-cent knives; and the way they handle those implements is a marvel. Scarcely before you are aware of it, they have the frames all lose and possibly out of the brood-nest, and before you can recover from your surprise they will probably show you the queen.

Well, how do they do it? Mr. Elwood and Mr. Hoffman both did it, when circumstances called for it, picking out four or five frames at a time—that is, at one operation—setting them by the side of the hive, and they might then return them severally or collectively at one operation. The great point where they seemed to gain over us is, that they will handle their frames collectively; whereas we are obliged, as a rule, to handle them one by one. We, after putting the frames in the hives, are obliged, as a rule, to finger each one separately; and if we do not happen to space them right, we are obliged to space them again, to get in the last frame. With fixed distances you can set them in the hives promiscuously, push on the outside one, and crowd them all up together; and of course there is plenty of room to get the last frame in, and finally the follower.

Mr. Elwood uses no brood-nest proper. He has two panels, each covering the two outside frames. He simply removes one of the panels, and then pulls the frames which he does not wish to examine, toward himself, and then very quickly lifts out the frame he wants, with a space of two or three inches in which to pull it out.

Perhaps some one will say, "Oh, well, if we were in New York state we would show them that we could get along with hanging frames." In reply to this I would say that, were you to draw a load of bees on hanging frames over the New York state hills, and over rough and stony roads, a few miles, it would be a miracle if you had anything else on arriving at your destination than a mass of mangled and dead bees, and the combs all pushed up close against each other. Remember, that locality, in the matter of frames, does make a big difference as to the kind used.

The question then arises, whether bee-keepers in prairie sections of the country would gain anything by adopting fixed frames. *I* think they would. The recent discussion of the matter of burr-combs shows that exact spacing is an important factor; and I know from hundreds of combs that I saw in apiaries where fixed frames were used, that truer and better combs are the result.

I am aware now that what I have said argues pretty strongly for fixed frames. But we must not lose sight of the fact that what one bee-keeper—yes, what hundreds of them like—*we* might, on careful trial, repudiate; and, taking things, all in all, it would be a very foolish thing to advise that all bee-keepers at once abandon the old suspended frame, without its fixed distance, and adopt fixed frames. The probabilities are, that there will always be used as many of the one as of the other. Personal tests by bee-keepers will decide the matter. Many bee-keepers are of many minds. Many Christians are of different beliefs as to technical points. We cannot, very well, at least for the present, have them all in one church; neither can we, if we would, induce all bee-keepers to use one style of frame. But it is wise for us, I think, to consider the matter, experiment on a small scale, and then draw our own conclusions afterward. ERNEST R. ROOT.

To the question of how many used fixed frames, 16 responded; 4 had tried and abandoned them, and 35 used the regular hanging Langstroth frame, without spacing contrivances of any kind.

B. Taylor showed a hive with nails in the upper ends of the frames acting as shoulders, which rested on a metal rabbet, notched to receive the frames, at proper distances.

J. Blanchard said that he used a closed-end frame, with a double bottom-bar; the lower bar serving as a bottom to the hive, when put together. The frames, with two followers on each end, formed the hive, and they were fastened together by loops on the ends of the frames, and a bar running through the loops. This hive could be enlarged *ad infinitum;* he used it, usually, with 10 frames. The entrance was on the end, in one of the followers. He had used this hive 16 years. He had about 60 colonies, and harvested an average of from 50 to 60 pounds of honey per hive.

SPRING DWINDLING.

The question, "Is Spring-dwindling greater, when bees are wintered inside than out-of-doors," was answered by A. I. Root, who said that when the bees were wintered out-of-doors and had a chance to fly every month, they came out stronger, and were better able to go through April.

E. R. Root thought that the loss from Spring-dwindling was greater when wintering in-doors, as the bees in the cellar were often suffering from the temperature being too hot or too cold—a matter over which the bee-keeper had but little control.

John Nau said that in severe winters, the bees wintered better in-doors—in mild winters out-of-doors. He did not put his bees in the cellar, unless the temperature got very low, early in the winter.

R. McKnight had wintered both ways for about ten years, and found that they dwindled more when wintered in the cellar. He thought the cause was, the lack of proper ventilation to the cellar. He thought that the weak-looking condition of the bees wintered in the cellar was due to their ill-health, owing to the lack of pure air during the confinement. He thought, however, that in hard winters, cellar-wintering could be carried on with less loss than out-door wintering.

QUESTION-BOX.

To the question, "Can first-class honey be produced in sections without separators," several answered, "Yes."

Question: "What is the best method of preventing bees from sticking the upper stories of hives to the lower ones with propolis?"

R. McKnight answered: Have the joints close and tight-fitting.

Question: "Will a cellar that is infested with rats and mice do to winter bees in?"

Dr. Mason answered, No.

Question: "What shall we do with our swarms of bees, when not wanted?"

Dr. Mason—I return them, and have no trouble.

J. Blanchard—I return them at once, after cutting out the queen-cells.

R. L. Taylor—I would rather kill the old queen when returning them, and let them rear young queens.

C. P. Dadant—Then they will be sure to swarm again.

Question: "Is there any difference in color and quality, between the honey extracted from light-colored combs, and that extracted from dark combs?"

Dr. Oren—No; certainly not. I have combs 15 years old, and the honey harvested from them is as nice as that from new combs.

Question: "Can bees expel a part of the water contained in the honey, while carrying it to the hive, from the field?"

Yes, by several.

Question: "How much advance should we ask for comb-honey over extracted-honey?"

J. M. Hambaugh — Comb-honey should be sold for at least twice as much as extracted-honey, and even then it would not pay as well.

Dr. Palmer—Extracted-honey could be furnished at half the price of comb-honey in the first season, but as the combs were preserved, it could be furnished at one-third that price, after that.

A young man just starting out for himself wishes to hear of a first-class location, in a good community, for bee-keeping. He wants a place where he can lay the foundation of a home.

R. McKnight—I know of a very good location, seven miles from the place where I live, in Ontario.

J. M. Hambaugh—Come close to my location on the Illinois river.

Dr. Oren—I have 150 colonies of bees that I want some one to take care of. I will furnish the hives and fixtures.

R. B. Leahy—In Waverly, Mo., there is a good unoccupied field.

BEE-HOUSES.

Henry Stewart asked about the practicability of bee-houses, and the objections to them. He wanted to know whether a bee-house 6 feet wide and 6 feet high, with sufficient length to accommodate 100 hives, arranged in two rows, on each side, with hives in alternating positions, regularly placed, and with a wire-cloth bee-escape in the ceiling, would be satisfactory.

J. M. Hambaugh said that he had had a house-apiary and had abandoned it, for several reasons. The bees would get mixed up, more or less, by being dropped from the combs during the manipulations, and the height of the ceiling interfered with the tiering-up, and manipulating them satisfactorily. He wanted to be able to shake bees in front of the hive, whenever necessary, and could not well do it in a closed house-apiary.

Wm. Lyon used a bee-shed with only one row of hives, and a roof high enough to work under; he had doors on the north, east and west, and could give air from either point, whenever necessary. He had the south one open at all times. The roof is so arranged that the sun shines on the hives in winter, when the sun is low, but not in the summer. He packs them in what is called shingle-toe, a coarse, stringy kind of sawdust from the saw-mill, and he never lost bees in wintering.

The complete description of this gentleman's apiary showed that he had everything in nice order, and arranged as carefully and as neatly as it is possible to have it.

EVENING SESSION.

After the calling of the meeting to order, the President called upon Mr. Thomas G. Newman to read the essay of Prof. A. J. Cook, on

The Requisites Necessary to Secure a Honey Crop.

Mr. President, Ladies and Gentlemen of the International American Bee-Association: Kindly permit me to preface my remarks with a word of sincere regret that I may not be with you on this occasion. I do not need to bespeak for you a most excellent meeting, for I am sure this will be a rare occasion and a rich treat, to all who are so fortunate as to be present.

The meeting is for the first time in the heart of the Great West, so famed for its large-hearted generosity and unrivaled enterprise. That the broad manly spirit of the West will be vividly illustrated at this meeting by the Western bee-keepers, goes without saying. We that are kept at home by stern necessity, will still rejoice in your good time, and eagerly await the Reports that shall give us a part, at least, of the banquet which you will enjoy in full.

If my theme seems presumptuous in that only the most self-confident and ambitious would presume to approach it, please bear in mind that it was not of my own choosing. Dr. Miller would frankly say "I don't know." Perhaps I would be wise to stop at his say; but I fear I should disappoint.

Of course I need not say that successful wintering is all-important. The bees must be in good vigor when the spring opens. It is as much of a truism to state that the bees must breed up very rapidly in April and May. We must have a perfect rush of bees as the clover harvest opens. To accomplish this, we must see to it that the bees have not just enough, but a generous amount of stores during this time of rapid breeding. Bees seem to have a logic of their own, and to reason about in this way: Many mouths take much bread. We have little bread, therefore we must not have too many mouths.

In the Northern States we must protect the bees in the spring, to secure the populous colonies so essential to the best success. Our experiments for the past two years, prove conclusively that protection pays an exceedingly heavy profit. Chaff hives will do, but I prefer an outer case and excelsior packing. This is cheap, convenient, neat, and, is in every way, a success. The cover forms a shade-board for the hives later: and, with it, we need no other arrangement to induce the best work.

It also goes without saying that we must have a prolific queen. I suggest as a subject for discussion, whether it will not pay to re-queen the apiary every year, or at least every second year. I believe this can be done at no extra cost, and in the general average, at a great profit.

The swarming must be so managed that we shall have strong colonies when the season opens. This is not difficult, but it is not the province of this address to discuss this question. The plan must keep the colonies strong through the season.

But after all this—with the strongest colonies, best arranged hives and surplus attachments, all in place at the dawn of the season, we are yet dependent on the flowers. If the flowers are not, or if they secrete no nectar, then shall we secure no honey.

Why do the flowers refuse to secrete nectar? Here is where I would do well to quote Dr. Miller's modest sentence. Yet, I fancy, I do know something about it. If we have such profound drouths as we experienced in Michigan and the West in 1888 and 1889, then the plants fairly writhe, and roll up for very thirst. They have not enough moisture for the life sap, and so, perforce, wither up. With no sap, how can they secrete nectar? They have no strength to mature seeds. Why then waste that strength in secreting nectar to win the aid of the bees to fertilize the blossoms, that seed may be formed?

A lasting drouth is fatal to the production of honey. Cold rains are, likewise, serious breaks in the elaboration of nectar by the flowers. They keep the bees in the hives, and the nectar from the flowers. The flowers say, practically at least, we will not waste energy in throwing out the distress signal, when there are no eyes to see it, if out. We have all seen this truth demonstrated during fruit bloom. We must have warm, moist weather to give the plants, the flowers and the secretion, or we cannot secure the honey.

But how about such a season as 1890? Abundant rains, many very warm days, seemingly just the conditions for the best success; yet no thrift in the apiary? Abundant white and Alsike clover, yet no nectar secretion—no storing of honey. Could I have looked forward to June, last April or May, I would not have given a nickle to have been insured a good honey crop. How are we to explain this? I will suggest one explanation, and ask others to add theirs, in the hope that we may reach a solution.

With us we had the clover and the bloom, and so all that we lacked were the conditions for nectar-secretion. We had the rains and the warmth, so the usual conditions were not lacking. The only explanation I can offer is, that last year being so terribly dry, the young plants were so blighted that they could not recover, and so were unable to perform their usual functions. Hence the dearth of nectar-secretion.

We know that a young calf or colt that is partially starved, never recovers its full vigor; and so, never can be at its best in its after years, no matter how well cared for. The young wheat was starved for water last fall. As a sequence, the yield was five or six bushels of very poor wheat to the acre, instead of 25 or 26 bushels of first-class grain.

Clover is a biennial, and so, last year was storing up vitality and substance to form the flowers and seeds of this season. It lacked food to do this preparatory work, and so lacked power to perform the subsequent functions: even though all the surroundings were favorable.

This, Mr. President, is my theory. If it lacks foundation, please overthrow it and suggest a better. If it be sound—then, in future, we shall be as eager that the previous season be favorable, as that the one at hand is to our liking.

A. J. Cook.

Dr. Miller said that whether Prof. Cook's theory be correct or not, it will make but little difference in the practical result. Although the outlook and prospects were good, this year, we had no crop. It was neither too wet nor too dry.

A Member asked: "What is the cause of the failure then?"

Dr. Miller—"I don't know.' (Laughter.)

R. McKnight—I cannot see the consistency of the theory of Prof. Cook, in regard to the clover. When there is a luxuriant growth and abundant bloom, we ought to expect a good crop. Atmospheric conditions must have much to do with the yield of nectar. A favorable condition of the atmosphere is almost certain to bring on a good crop, when flowers are plenty. The exact condition of the atmosphere in a good honey yield we cannot tell.

J. Blanchard—In 1868 we had circumstances tending, in my opinion, to a very good honey-flow, but the bees starved. Many bees and many blossoms were to be found, but there was no honey. I agree with Mr. McKnight, that all depends on certain atmospheric conditions which are not yet understood.

S. A. Shuck—During linden-bloom, this summer, on a certain warm pleasant day, the bees worked wonderfully; the weather had all the indications of rain, in prospective. There was a light rain shortly after, and the crop failed for 2 or 3 days after that.

Dr. Miller—Can any one tell how we can help all this? If not, let us pass to other subjects.

R. L. Taylor—This matter is important, if any light can be thrown on the subject.

J. W. Bittenbender—I think this is the proper place to quote Josh Billings: "What's the use to know so much, when so much that you do know, ain't so?"

L. W. Baldwin said that the most important part of the subject, discussed in Prof. Cook's essay, is how to get our bees ready for the harvest.

A. I. Root—There is something wonderful in the way in which plants will yield honey one day and not another. A certain bee-man sent to us for figwort seed, and raised a large quantity, and after it had been blooming for some time, he wrote us a letter complaining that we had humbugged him, as he had not seen a single bee on any of his plants. We were very much at a loss to explain what was wrong, when, the next day, we received another letter from the same party, saying that the bees had begun working on the figwort the same afternoon, after he had written his letter, and that they worked very heavily on it regularly, afterwards.

R. B. Leahy said that he expected to see a failure in the honey harvest every season, following a very good harvest. He thought that the reason was that the flowers had exhausted the necessary constituents that served to make the honey, and that a new supply had to be formed, in the ground, by nature.

MISCELLANEOUS BUSINESS.

The question-box being now exhausted A. I. Root stated that it was very important to have a report of the proceedings in one of the bee-periodicals, and that Mr. Newman had agreed to publish it in the American Bee Journal.

Mr. Clarke asked whether it was intended to publish the report in pamphlet form, and upon receiving an answer in the affirmative, moved that the sum of $20 be set apart for this purpose; that report to be published by Mr. Newman, as usual. Carried.

The other expenses of the Association, such as printing, postage, badges, and music, amounting to $39.25, were also allowed.

The Secretary having refused to accept any remuneration for his services, a vote of thanks was tendered him by the Association.

Mr. McKnight, of Ontario, gave a rescitation, a description of an Irish wedding, that was full of humor, and evoked a great deal of laughter.

After a few pieces of music by Field's orchestra, and a short informal meeting, the Convention adjourned until morning.

THIRD DAY.

The President called the Convention to order at 8:30 a.m., and requested the Rev. W. F. Clarke to lead in prayer.

The report of Secretary Dadant, showing a balance in the hands of the Treasurer of $59.75, was read and approved.

The Treasurer's reports were received and approved. It was moved to pay the Janitor $3 for his services and attention to our wants. Carried.

The subject of location was then discussed, and after the reading of an invitation by the Eastern bee-keepers, to meet somewhere in the Northeast, and more especially at Lake George, the Convention decided to hold its next meeting at Albany, N. Y.

The Association received an invitation to meet some day in Denver, Colo. This invitation was brought in person by the President of the Colorado State Bee-Keepers' Association, the Rev. E. Milleson.

The election of officers resulted as follows: President, P. H. Elwood, of Starkville, N. Y.; Vice-President, Eugene Secor, of Forest City, Iowa; Secretary, C. P. Dadant, of Hamilton, Ills; and Treasurer, Ernest R. Root, of Medina, Ohio.

The essay of Chas. F. Muth, of Cincinnati, O., was then, by request, read by Thomas G. Newman.

Are Italians or Hybrids Preferable in an Apiary Run for Honey?

Twenty-five or thirty years ago, after the Italians had made their appearance in this country, every bee-keeper was enthusiastic—not only because the good old rule held out yet, that there was one bad season only in seven, and large money was realized for good crops, but also because the three golden bands of his Italians were adding a peculiar charm to his apiary.

It was not a small satisfaction to show to his friends his golden-colored, large bodied Italian queens, whose royal manners and measured steps made one feel proud every time their hive was opened! Yes, a "two-inch queen," as he called the large yellow queen to a friend, drew a host of admirers. Her mother had been sent him by a friend in St. Petersburg, Russia. No fifty dollars would have bought that queen, whose daughters and grand-daughters all showed their fine "Russian" family strain.

The Italian bees have developed interest in apiculture, and aided materially toward new discoveries. Their qualification as honey-gatherers was soon appreciated. The black bees or hybrids would attract no attention at all, and the Italian colonies found no rest with our enthusiastic brethren. Their colonies would be divided, an unlimited number of queens reared, nuclei started, etc.

The arrival of a friend was the signal for the opening of the hives of the pure Italians. The queens had to be admired, etc. Who thought of the hybrids? "That one is not pure," one would say, passing by a hybrid colony. And it was all the attention paid it.

The next thing we learned, was that the blacks and hybrids were better honey-gatherers than Italians. Yes, and we were told that dark-colored Italians, and those bees that are the bravest on the warpath, were the best bees for profit. Our good friends, Messrs. Jones, Benton and others, deplored Asia, and gave us Syrian, Cyprian and Carniolan bees. The Prussian government imported large numbers of Egyptian bees. Most of us old bee-keepers have tried them all, and I believe I express the opinion of the majority if I say that the pure Italians are the best, all points considered.

It happens sometimes that black or hybrid colonies give as good results as any; but as a rule, and according to my experience, they were my purest Italians that gave me the largest crops.

Pure Italian colonies are always best supplied with winter stores, after a poor season has been recorded, while during a good flow of honey, they seem to be the only variety whose whole energies appear to be bent on the collecting of the sweets. Very few swarms issue during such a time. Breeding is neglected, and decreases gradually as the yield of the nectar ceases.

These virtues of pure Italians cannot be over-estimated. They are the cause of small consumption of honey after the harvest is over, and consequently have a better supply of winter stores when fall approaches.

My bees are wintered on the summer stands, and my success in wintering has been, so far, second to that of no one, in spite of full supplies of pollen and fall honey. I do not believe in closely extracting and back-feeding, nor am I afraid of any kind of fall honey being injurious to my bees. But I do believe in large brood-chambers, which are appreciated by no variety of bees better than by pure Italians.

Their breeding ceases gradually with the flow of honey, and honey takes the place of their brood. Almost as soon as their young bees emerge, honey appears in those vacated cells, and keeps gradually spreading from the outside combs towards the center of the hive. No other race of bees has their brood-chamber as well provided with winter stores, if, after the main harvest is over, a let-alone policy is observed.

Besides the virtues mentioned above, the Italian bees are the most docile of all; they are beautiful to look at, and no stampede takes place when a comb with bees is taken from a hive and set alongside in the grass. One can handle them without veil or gloves. A little smoke only is required to keep their temper within due bounds. If I had no other reason than the last, it would be a sufficient one for me to say: Give me, for profit and pleasure, the pure Italian bee every time. CHAS. F. MUTH.

The time left being very short, the President decided that no discussion would follow.

The report of the Defense Committee of the Association was then called for, and Thomas G. Newman, the General Manager of the National Bee-Keepers' Union, addressed the Convention as follows:

National Bee-Keepers' Union.

Article X, of our By-Laws, makes a Defense Committee of the officers of the "National Bee-Keepers' Union;" its President is declared to be a Vice-President of this Association, and its General Manager is a "delegate to the International Convention." In behalf of your Defense Committee I will therefore make the following Report:

The Union will not make war upon any legitimate pursuit, but when the rights and privileges of bee-keepers are attacked, it will make a defense like the ancient patriots—united, systematic, fierce and overwhelming! Its tower of strength being in the rightfulness and justice of its cause.

THE UNION ALWAYS TRIUMPHANT.

To show the value of united action, and the moral weight of the "backing" of the National Bee-Keepers' Union, we will make a brief enumeration of the outcome of all the suits against bee-keeping in the United States, which the Union deemed it expedient to defend, and it will be seen that *not one has been decided against the bees!*

The "Freeborn" case in Wisconsin was presented in such a manner, backed up by the Union, that the Judge kicked it out of court!

In the "Bohn" case, in California, the united resistance of the bee-keepers of the Nation was too much for the fruit-growers—and that trouble is now all conquered! the raisin-growers admitting that they were mistaken!

The "Darling" case in Connecticut was dismissed as soon as it was discovered that he was "backed up" by the National Bee-Keepers' Union!

The "Richardson" case in Indiana was dismissed by the Court when it was found that the Union had to be fought as well as the poor gardener. That was too much for the enemies of the pursuit of bee-keeping to attempt.

The case of S. W. Rich, of New York, was a suit by a disagreeable neighbor, to compel the removal of his home apiary outside of the city limits. He also sued for $1,200 as damages for injuries (?) inflicted by the bees upon his person and property. The jury, from which every person having bees was excluded, gave him but *six cents* to cover wounded feelings and damaged property!!

This virtually declared that the bees were *not* a nuisance. The result is an overwhelming defeat for the enemies of the pursuit of bee-keeping, and another victory for the National Bee-Keepers' Union.

BEE-KEEPING NOT A NUISANCE.

The *Crowning Victory* was obtained in the Arkadelphia case, in Arkansas. There, by the enforcement of an unlawful Ordinance of the city, Mr. Clark was deprived of his liberty, and the constitutional rights guaranteed to every citizen of the United States. Even granting that it was wrong in Mr. Clark not to obey the city authorities, he should have had a speedy trial by an *impartial jury*—all of which was denied him! Even when released under a writ of *habeas corpus*, he was, within three hours, re-arrested and fined. After demanding a change of venue, because of the prejudice of the Mayor, that functionary again fined him, denying him his constitutional rights.

This case was appealed to the Supreme Court. The best legal talent was employed by the Union—Judge Williams and Major Witherspoon. The result was that the Supreme Court decided that the City Ordinance against bee-keeping was "illegal and void"—and that the keeping of bees was *not a nuisance!*

When the prosecution realized that the bee-keepers had an organized body for defending the pursuit against the malicious attacks of the ignorant and the prejudiced, it *weakened*—it tried "to hedge"—was willing to dismiss all the cases against Mr. Clark on a pretended informality in his bonds!

Here we have another result of the benefits to be derived from organization and combined effort. The members of the Bee-Keepers' Union have many triumphs to feel proud over, and this adds another laurel.

"A working bee but seldom
 Turns from his way to sting;
But he must have a world of room
 To give his body swing.

That which he claims is yielded,
 We're apt to think him right—
Who works to win, who wins to keep,
 And can both work and fight."

IT IS RESPECTED.

The Decision, and arguments of Judge Williams have been printed in pamphlet form, and it has since prevented scores of lawsuits in many places, where the first steps had been taken.

The City Council of Fort Wayne, Ind., passed an Ordinance against keeping bees within the city limits. If enforced, it would practically wipe out the pursuit of bee-keeping there. Such a pressure was brought to bear by the bee-keepers, backed up by the Union, that no attempt is made to enforce that Ordinance.

The McCormick bill introduced into the Legislature, intending to "wipe apiculture out of Michigan," as Prof. Cook stated it, raised such a buzzing about his ears that it was tabled on his own motion, *and there died.*

GETTING DECISIONS OF LAW.

In the first case defended by the Union, Judge Clementson remarked:

> This case involves new points of law, upon which there are no rulings of the Supreme Court. We have no law upon which to instruct a jury.

That was the Freeborn case, in Wisconsin, which the Union had defended so vigorously that the complainant lost his grip in the first round, and it was literally kicked out of Court.

In the "Rich" case also, the Judge complained that there were no precedents or decisions of law, and, as a result, he ruled very erroneously!

The Manager of the Union, upon consulting with the Attorneys for the Union, concluded that the first things needed were "Decisions and Rulings of the Supreme Court;" and if these could be obtained by earnest and diligent work, as soon as possible, the bee-keepers' battle would be half won.

USING DECISIONS OF LAW.

That this was wisdom, has been shown in all the later cases. Just as soon as the law is threatened on the pursuit of bee-keeping by some ignorant or jealous individual, we *salt* him with decisions of the Supreme Court, and when well "rubbed in," he is "cured!" That ends the trouble!

If a City Council or Town Board is anywhere troubled by a complainant, and asked to pass an Ordinance "declaring bee-keeping a nuisance, and prohibiting it within the corporate limits," etc., every member, together with the Mayor, the City Attorney, and the one making the complaint, are all *dosed* with the same pamphlet, and the matter is at once dropped—killed by the "Decision of the Supreme Court of Arkansas!"

We now have Decisions and Rulings of the Supreme Court that are worth to us many times their cost. They not only save trouble and annoyance to bee-keepers, but expense to the Union—by preventing lawsuits!

THE UNION COMMANDS RESPECT.

That Decision is our "Corner-stone of Defense!" It calls a *halt* in all such "careers of madness," and demands justice for the 300,000 Americans who are now engaged in the keeping of bees!

"What makes a business respected?" asked the President of the Union, and he answers his own question thus: "Its usefulness to humanity. What makes a noisy, dirty rolling-mill respected? Its usefulness. What makes horses and horse-stables respected in large cities? Their usefulness. Why do we respect the constant blowing of steam whistles in large cities? Their usefulness. Who is a more useful member of our great pulsating humanity, than he who gathers together a wealth that would otherwise be lost? Who accomplishes this in its entirety more than the honey-producer? Why is not our business respected? I think it is, because the general public are not informed of the fact that honey-producing, with modern fixtures and methods, is a great business, and of value alike to the bee-keeper and to his country."

When the people are aware of the extent of the pursuit and its usefulness, they will respect it! And, more, when they understand that bee-keepers stand by one another, and have a Union for Defense, they will respect it!

KILLED BY THE LAW.

All the late cases against bee-keepers have been *killed* by reading the decisions of the Supreme Court of Arkansas? And by a judicious course, we imagine that all trouble and annoyance to bee-keepers in their legitimate business can be averted by appealing to the intelligence of the public, and its sense of right.

Lamentation without effort to overcome difficulties, only exhibits our weakness. We are here to "work out" our deliverance from surrounding obstacles—to ride above the storms—to defeat the machinations of our enemies—to cause *truth* and *right* to triumph.

To allow decisions of Judges and Rulings of Courts adverse to Apiculture to have been placed on record, because of our indifference—would have been the greatest mistake of the age! It would have entailed disaster generally to all the interests of bee-keeping!

That decision of the Supreme Court will do more to guarantee to bee-keepers their *rights* and privileges, than anything ever yet achieved! Should the Union cease to exist to-day, that Decision will be its "crown of glory" and its generous benediction.

THOMAS G. NEWMAN,
General Manager.

A vote of thanks was given to the National Bee-Keepers' Union and to its General Manager, for the excellent report just made, and the report was by vote adopted.

INCORPORATION.

The committee on Organization and Incorporation reported, and read the following Constitution as re-written:

ARTICLE I.—*Name.*

This organization shall be known as "The North American Bee-Keepers' Association," and shall include in its territory all of the United States and Canada.

ARTICLE II.—*Object.*

Its object shall be to promote the general interests of the pursuit of bee-culture throughout North America.

ARTICLE III.—*Membership.*

1. This Association shall consist of its officers, life members, annual members, honorary members, delegates from affiliated local associations, and ex-presidents.

2. Any person interested in Apiculture may become a Life-Member, upon the payment to the Secretary of the sum of ten dollars, and receiving a majority vote at any annual meeting of this Association.

3. Any person interested in Apiculture may become an Annual Member upon the payment to the Secretary of one dollar. Ladies interested in apiculture may be admitted free.

4. Annual Members shall be entitled to vote, hold office, and discuss any question before the Association.

5. Any persons may become Honorary Members by receiving a majority vote at any regular meeting.

6. Delegates from affiliated local Associations shall be admitted free, and have all the rights of annual members.

ARTICLE IV.—*Officers.*

1. The officers of this Association shall consist of a President, First Vice-President, Secretary and Treasurer, and their term of office shall be one year, or until their successors shall be elected and qualified. These officers shall constitute the Executive Committee.

2. The Presidents of all the Local Associations, in affiliation with this Association, shall be *ex-officio* Vice-Presidents of this Association.

ARTICLE V.—*Affiliation.*

Any State, District, Territory or Province in North America, may become affiliated with the "North American Bee-Keepers' Association" upon the annual payment of five dollars, which shall be due on the first day of January in each year, in advance for the calendar year.

ARTICLE VI.—*Meetings.*

Its principal place of business shall be at Chicago, Ills., and the annual meeting of this Association shall be held at such place as shall be agreed upon at the previous annual meeting. Ten members shall constitute a quorum for the transaction of business, but a less number may engage in discussion, and adjourn until some future day.

ARTICLE VII.—*Vacancies in Office.*

Vacancies in office, by death, resignation, or otherwise, shall be filled by the Executive Committee, until the next annual meeting.

ARTICLE VIII.—*Amendments.*

This Constitution may be amended at any annual meeting, by a two-thirds vote of all the members present.

The report was accepted, and then adopted. A committee of five, composed of Thomas G. Newman, for Illinois; Eugene Secor, for Iowa; R. McKnight, for Ontario; A. J. Cook, for Michigan, and Ernest R. Root, for Ohio, were then appointed to perfect the work of Incorporation, according to law.

RESOLUTIONS.

The following resolutions were unanimously adopted:

Resolved, That the thanks of this Association are due, and are hereby tendered to the business men of Hamilton and Keokuk, for their kind and generous offer of carriages to convey us to the home of the Messrs. Dadant.

Also, to the Business-Men's Association of Keokuk, which has so thoughtfully and considerately paid for and given us the use of this splendid hall.

Also to Dr. Miller and his assistants (the singing committee) for their enjoyable music.

And to President Taylor and Secretary Dadant, for the efficient manner in which they have prepared for, and conducted this meeting.

And last, but not least, that we extend our most grateful acknowledgement to the *Constitution-Democrat* and *Gate City*, the daily papers of this city, for the full, faithful and unusually correct reports of our proceedings.

Also, to the Keokuk and Hamilton Bridge Company, for the free passes furnished to the members of the Association during the last day.

Mrs. L. Harrison introduced a resolution which was carried, as follows:

Resolved, That we extend our love and sympathy to our dear Father Langstroth, and are ever mindful of the benefits derived from his labors; and, to show our appreciation, we donate $50 from the treasury of the Association for his benefit.

This closed the session, and the Convention adjourned. In the afternoon the delegates visited the extensive Dadant apiary, conveyances being provided by the Business-Men's Association of Hamilton.

[The list of Members, Affiliated Associations, and Delegates, as well as the Report of the Committee on Exhibits, and some other matters of interest, will be published next week.—Ed.]

CONVENTION DIRECTORY.

Time and place of meeting.

Dec. 16, 17.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Dec. 18, 19.—Carolina, at Pineville, N. C.
N. P. Lyles, Sec., Derita, N. C.

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood. ..Starkville, N. Y.
Secretary—C. P. Dadant ......Hamilton, Ills.

EX-PRESIDENTS.

President.	Year.	Where Held.
Rev. L. L. Langstroth	1870	Indianapolis, Ind.
M. Quinby	1871	Cleveland, O.
Rev. W. F. Clarke	1872	Indianapolis, Ind.
Seth Hoagland	1873	Louisville, Ky.
Rev. W. F. Clarke	1874	Pittsburg, Pa.
G. W. Zimmerman	1875	Toledo, O.
W. H. Andrews	1876	Philadelphia, Pa.
J. H. Nellis	1877	New York.
Thomas G. Newman	1878	New York.
Thomas G. Newman	1879	Chicago, Ills.
Dr. N. P. Allen	1880	Cincinnati, O.
Prof. A. J. Cook	1881	Lexington, Ky.
D. A. Jones	1882	Cincinnati, O.
Rev. L. L. Langstroth	1883	Toronto, Ont.
L. C. Root	1884	Rochester, N. Y.
H. D. Cutting	1885	Detroit, Mich.
Dr. C. C. Miller	1886	Indianapolis, Ind.
Dr. A. B. Mason	1887	Chicago, Ills.
Dr. A. B. Mason	1888	Columbus, O.
Hon. R. L. Taylor	1889	Brantford, Ont.
P. H. Elwood	1890	Keokuk, Iowa.

SELECTIONS FROM OUR LETTER BOX

Many Bees will Starve.

The season of 1890 is over, and in a few days we will have our bees in the cellar, but not in as good condition as they were one year ago. The prospect last spring was as good as I ever saw it, but, alas, white clover yielded but little honey. Basswood enabled a part of them to fill up the brood-nest, and store about one-sixth of a crop of surplus comb honey; while the other part of them stored but little in the brood-nest, and the result will be that among the farmers who will not feed them, from one-fourth to one-third of the bees will starve, and next spring there will be less bees than last spring.

O. B. Barrows.
Marshalltown, Iowa, Oct. 26, 1890.

Swarms Without Drones.

If natural swarms occur where there are no drones allowed to be reared, it is contrary to my experience. One season all drones were prevented from being reared in my apiary, and *no swarms* was the result. I supposed bees in a normal condition acted upon the principle of isolation, and would *not* cast a swarm unless they had drones of their own. There is some contradiction in Query 737, and hence this note, "Are drones consumers?" If so, the whole theory of isolation is upset, and a swarm may come from any colony, or one not rearing drones. T. F. Kinsel.
Shiloh, O., Nov. 8, 1890.

Not Discouraged.

I cannot report such a large honey crop as last year, but considering the season I have done fairly well. I had 10 colonies in the Spring, and increased them to 12, by natural swarming. I obtained 125 lbs. of comb-honey in 1-lb. sections, capped, and about 25 lbs. not capped, which I extracted. I received 18 cents per pound for the comb, and 15 cents per pound for the extracted. All of my bees go into winter quarters with plenty of stores of their own gathering, as the late rains in the Fall brought on a honey-flow which came to their rescue. I am not at all discouraged, and am looking to the future for better results.

I cannot do without the Bee Journal. I have more than received the cost of the subscription price during the year. I sometimes think a single issue is worth its price for a whole year. Geo. Frey.
Genesee, Ills., Nov. 8, 1890.

Moving Bees.

Well, I have moved again. As an itinerant preacher, I have got to my new location. My bees were moved 40 miles in the wagon. We put some in the wagon, and some were piled on top of a frame of boards, extending clear around the wagon-box. It was a queer-looking load. Only six combs were broken in all, and these were mostly new. Each frame was tacked fast with a wire brad. I never fasten the bottom of the frames at all. I do not use wired foundation either.

It is not nearly so much of a job to move bees as it is furniture. If I had some kind of a hive with stationary frame, the trouble of moving my bees would be still less. The most vexatious thing about it all is, running into new localities where there are black bees that must be Italianized in order to keep mine pure. W. P. Fayloa.
State Line, Ind., Nov. 14, 1890.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

"**Open the doors** and windows,
  And let the golden air,
Sweep out the dust and cobwebs
  And make the old home fair.
For swift from hamlet and city,
  Swift over river and sea,
My boys and girls are hasting
  To keep Thanksgiving with me."

◆

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

DENVER, Oct. 13.—We quote: 1-lbs., first grade, 16@18c. Ext, 7@8c. Beeswax, 20@25c
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb Southern, 70c per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 8.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 12.—There is a good demand for all kinds of honey. Arrivals are fair of all but comb honey and Southern extracted. Small lots only of each are arriving, and are sold immediately. California honey seems to be as highly appreciated in our market as the best clover honey. We quote choice comb honey nominal at 16@18c per lb. Extracted honey at 5½@8c per lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

BOSTON, Nov. 13.—Fancy white 1-lb. comb honey selling at 19@20c. No 2-lb. comb honey in this market. Buckwheat or off-colored honey not wanted at any price. Extracted selling at 7½@8½c.

No beeswax on hand. Demand good.
BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water st.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

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☞ The Carolina Bee-Keepers' Association, will hold the last session of 1890 in the Town Hall, Pineville, N. C., Dec. 18, 19. A good programme All who feel an interest in modern bee-culture are cordially invited. Bring or send a full report of the season. Entertainment free.
(Other papers please copy.)
N. P. Lyles, Sec., Derita, N. C.

◆

☞ The Annual Meeting of the Northern Illinois Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House, at Rockford, Ills., on Dec. 16-17, 1890. The President has a good Programme in course of preparation.
D. A. FULLER, Sec.

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents.

Advertisements.

Turkeys for Market
AND
Turkeys for Profit.

BY "FANNY FIELD."

WRITTEN for those who are interested in Turkeys and wish to make them profitable. She reared in one year 150 Turkeys—and did the work for a family of five—netting her $300. No farming pays so well as Turkeys.

CONTENTS.—Age of breeding stock, about the Gobbler—Which breeds are best and most profitable—Setting the eggs—Care while hatching—Profit per head—Care until fully feathered—Food for the young—Save the feathers, they bring good prices—Number of hens to a Gobbler—Naraganset Turkeys—White Turkeys—Bronze Turkeys—Common Turkeys—To restore chilled Turkeys—Diseases of Turkeys—Leg weakness—Killing and dressing—Mark your Turkeys—Marketing—Capital and number to begin with—Tells all about the Turkey business. Price, **25 cents.**

Given for One New Subscriber to this paper for one year, with $1.00.

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246 East Madison St., - CHICAGO, ILL.

MUTH'S HONEY EXTRACTOR
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.
For Circulars, apply to CHAS. F. MUTH & SON,
Cor. Freeman & Central Aves., Cincinnati, O.
Send **10c** for Practical Hints to Bee-Keepers.

BEESWAX WANTED.

Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

British Bee Journal
AND BEE-KEEPERS' ADVISER.

IS PUBLISHED every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

OUR BOOK PREMIUMS

We desire to get our friends all through the country to aid us in increasing our list of Subscribers to the

AMERICAN BEE JOURNAL—Weekly, 32 Pages, $1.00 a Year ; and
The ILLUSTRATED HOME JOURNAL—Monthly, 32 Pages, 50 Cents a Year.

We make the reader this proposition: If you will get us **Two New Subscribers** to the BEE JOURNAL, or **Four** for the HOME JOURNAL, we will **present** you with either of the following Books, as you may choose :

DOOLITTLE'S QUEEN-REARING,

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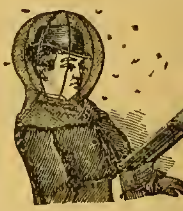

There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

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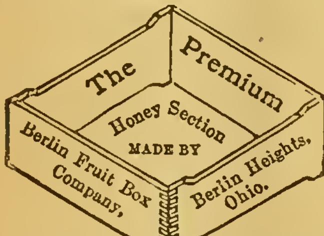

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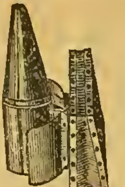

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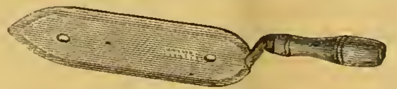

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Doctor Smoker	3½ inch, post-paid	$2 00
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Sent promptly on receipt of price. To sell again, send for dozen or half-dozen rates.

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Sirs:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do, your trade will boom. Truly, F. A. SNELL.

Vermillion, S Dak., Feb. 17, 1890.
Sirs:—I consider your Smokers the best made, for every purpose. I have had 15 years' experience with 300 to 400 colonies of bees, and know whereof I speak. Very Truly, R. A. MORGAN.

Sarahsville, Ohio., March 12, 1890.
Sirs:—The Smoker I have has done good service since 1883. Yours Truly, DANIEL BROTHERS.

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IN ADDITION to our New England **Honey Trade** we have leased a Store in New York City (in the best possible location to catch the Grocery Trade), and propose handling

COMB AND EXTRACTED HONEY

there. As we have been practical Bee-Keepers and have had some 12 years' experience in the Honey Trade (during which time we have handled MORE HONEY than any House in New England), we feel justified in saying that we understand the Honey Trade, and think we can handle your **Surplus Honey** to the very best advantage.

We shall endeavor to make Quick Sales at the **very highest prices**, and by making prompt returns we hope to merit your patronage. Advances made when requested. Stencils furnished—also printed instructions for Packing and Shipping, giving valuable information gained by our experience in Shipping Honey by the Ton and in Carload Lots.

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Hay, Grain, Wool, Hides,
Green and Dried Fruits,
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OR ANYTHING YOU MAY HAVE TO US. We can sell your shipments at the highest market price, and will make you prompt returns. Write us for prices, tags or any information you may want.

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Yours anxious, to please
Ed. L. Huntley.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Nov. 29, 1890. No. 48.

EDITORIAL BUZZINGS.

And if you want a motto,
  To aid your pathway through
This life of double trouble
  For me as well as you,
Why then I offer this one,
  Although it is not new :
It's never trouble trouble,
  Until trouble troubles you.

◆

"**Honey** from the Rock of Ages," by Rev. Albert Sims, of Otterville, Ont. (25 cents), is a collection of practical stories.

◆

Mr. Justus A. Van Deusen was married to Miss Cora L. Bowman on Thursday, Oct. 23, 1890, at Buel, N. Y.. This is the junior member of the firm of J. Van Deusen & Son, Sprout Brook, N. Y., manufacturers of the justly celebrated flat-bottomed comb foundation. We wish the newly wedded pair much happiness and prosperity.

This item should have been published before this, but was over-looked in the "rush" we have been in since the Convention, trying to catch up our work which had to lay over during our absence.

◆

We have Received a copy of a new pamphlet of 150 pages, published by Milton Weston, 149 Michigan Avenue, Chicago, Ills., entitled, "World's Fairs from London (1851) to Chicago (1893) by C. B. Norton, illustrated with views and portraits in the Maas art-type." It contains full particulars concerning the ten World's Fairs which were held during the past 40 years, and is illustrated with 30 full-page engravings. Its beautiful pictures are well worth preservation, and will cause admiration to every beholder. A copy of this book should be in every house in North America.

The North American Bee-keepers' Association is now of age. It celebrated its 21st birthday at Keokuk, Iowa, last month. We have given over 70 columns of a report of the proceedings of that Convention—the largest ever published during its whole existence. Our readers will appreciate this, as they will all be able to read a very full digest of all that was said and done at that meeting.

Bro. Root has our thanks for the very kind allusions contained in the paragraphs copied below. Coming from such an excellent periodical as *Gleanings in Bee-Culture*, the commendation is all the more appreciated. Apiarists have cause for much congratulation upon the general excellence of their periodical literature, as well as the friendship and harmony among the editors of the different bee-periodicals.

> Further particulars in regard to the matter will be found in the AMERICAN BEE JOURNAL, as also a full report of the proceedings of the Convention, which we do not give here, as we do not wish to have our pages contain something that most of our readers will see in the AMERICAN BEE JOURNAL.
>
> I hope I may digress enough right here to urge every reader of *Gleanings* to subscribe for the AMERICAN BEE JOURNAL at once, if he does not now take it. Its editor has perhaps done more to keep up our conventions, report their proceedings, and labor for the general interest of the bee-keepers of America than any other one among us. The field occupied is so different from the one covered by *Gleanings*, that you will not find much repetition, if you take the two.

Here is another thing that we want to present to our readers, and we can do no better than to give the following from *Gleanings* for Nov. 15 :

> The Convention was one of the best I ever attended. The attendance was not only large, but our Western friends came and handed in their dollars in order that they might become members, more generally, I think, than in any other Convention I ever attended.
>
> Perhaps I might mention right here, that one of the troubles in our conventions is in this very line. A good many attend every session, take great interest in the proceedings, and sometimes take part, to a considerable extent, in the debates ; yet when the call is made for the funds to keep up the necessary expenses, in many localities there has been considerable hanging back.
>
> Dr. Miller, Dr. Mason, Prof. Cook, and others, have urged so hard that every one should hand in a dollar, that sometimes we have almost had hard feelings in regard to the matter. If we move our National Convention all over the United States, or, at least, over a great portion of it, as we have been doing, it happens, as a matter of course, that a great part of the members (and oftentimes the presiding officers) are made of people who never attended before, and perhaps who may never attend again. This seems a little unfortunate ; and yet if all parts of the United States are equally represented, it must be so, to a greater or less extent.
>
> During this last session, arrangements were made whereby we might have a certain number, at least, who would be members year after year, whether they could be in attendance or not. This is secured by making anybody a life-member upon the payment of $10.
>
> If I am correct, the editor of the AMERICAN BEE JOURNAL was the first one to pay $10 and become a life-member. Ernest and I have also agreed to become life-members, and I said at the Convention that I thought the United States should furnish at least 25 who would pay a like sum, and hereafter be members for life.
>
> Now, then, who is there among our readers who is ready to stand by us for the purpose of making a permanent institution of the North American Bee-Keepers' Society, as it is to be styled, in order that it may stand on a permanent basis, and not be left to be blown about by the wind, and dry up and die like autumn leaves ?
>
> It is proposed to have it incorporated according to the laws of the United States, and it seems to me this would be a very sensible and wise proceeding.

These life-members will be the binding link, and will insure premanency and stability. The Association will be incorporated soon, and the life-members will be the incorporators. ☞ Let any one who wants to share in this honor send ten dollars to C. P. Dadant, the Secretary at Hamilton, Ills., and be enrolled as a life-member of the Association.

◆

Editorial Courtesy.—This is what the *Canadian Bee Journal* says about the very inappropriate essay by the editor of the *Review*, which was read at the Keokuk Convention :

> We defy any one to point out any way in which we have ever written down other people's hives or fixtures to boom our own. The *Canadian Bee Journal* impartially treats all subjects presented in its columns, and is just as willing to permit good things to be said of hives and fixtures sold by competitors as to have such said of our own.

Yes, Brother Macpherson ; and they all do. It was a great piece of foolishness to send such an essay to a Convention. It was an editorial written for the *Review*, and its "personal chats" with subscribers, and individual suggestions were totally out of place at a Convention. But as Bro. Hutchinson was indisposed and "out of sorts," we must overlook his editorially-youthful indiscretion, and cover it with the mantle of charity. It was a mistake ; but it did no harm. Of the editors present, not one referred to his own publication, or tried to outvie the other in anything. In fact, just the opposite was the rule—practicing this injunction : "In honor preferring one another." With such a state of things existing, the unfortunate essay was powerless to do harm, and did not cause the least ripple on the waters of cordiality.

◆

Speaking of sending for a sample copy of the BEE JOURNAL, Brother Henry Alley, in the *American Apiculturist* for November, remarks as follows concerning the ILLUSTRATED HOME JOURNAL :

> By the way, reader, when you send for a copy of the AMERICAN BEE JOURNAL, why not, at the same time, enclose ten cents and get the ILLUSTRATED HOME JOURNAL three months ? We receive this publication each month, and find its columns filled with choice and interesting reading.

NOVEMBER.

BY E. H. DIEHL.

Now study the beauties of Autumn,
On foliage, grasses and flowers ;
Vapidity soon will have caught 'em
Embraced within Winter's cold powers.
Magnificent views in their splendor
Bedeck ev'ry hillside in glory ;
Enjoy them with hearts true and tender,
Revere the great Source of their story.
Leesburgh, Ills.

—Illustrated Home Journal.

GLEAMS OF NEWS.

Father Langstroth has been again heard from. The Keokuk Convention voted to send him a reminder of its affection and esteem, by requesting the Treasurer (E. R. Root) to send him $50 from the treasury. This was done, and his reply is as follows :

> DEAR FRIEND ROOT :—In reply to your letter, inclosing a check for $50, sent to me by request of the North American Bee-Keepers' Association, recently held at Keokuk, I would return my sincere thanks for their very kind and helpful remembrance of their old bee-keeping friend. I am still in a feeble and suffering condition, although much better than I have been for nearly two years. Thanking you for your many acts of kindness in the past, I remain
>
> Yours affectionately,
> L. L. LANGSTROTH.
>
> Dayton, O., Nov. 7, 1890.

Columbian Fair.—The following from Dr. A. B. Mason is of importance, and we would call special attention to it :

AUBURNDALE, O., Nov. 17, 1890.

FRIEND NEWMAN :—I sent a portion of my address, read at Keokuk, to the Director-General of the World's Columbian Fair, and a part of the reply, received yesterday, reads as follows :

> In response, I have the honor to say, that at the present time it is not possible to give you definite information as to the plan of organization of such a Department, further than to say, that the bee-culture industry will be amply provided for in the classification of exhibits. Your letter will be filed for consideration at an early date when this subject is acted upon. I remain,
>
> Yours very truly,
> GEO. R. DAVIS, *Director General.*

I would like to suggest that the President or Secretary of each State Bee-Keepers' Association let me know, at once, about the amount of space the bee-keepers of their State will be likely to want at the Columbian Fair.

I expect to ask for about 3,000 square feet of space for Ohio, and if the other States that should exhibit, will do so in proportion, we shall need from 10,000 to 150,000 feet of space, and will "astonish the natives" with the magnitude of the display.

In a "P. S.," Gen. Davis says : "We will soon send you classification and application for space," so it will be seen there is no time to lose.

Let each State Society at its next meeting choose a committee to have charge of getting up the State exhibit, and the securing of an appropriation by their next Legislature to defray expenses, for it will take money to make a creditable display.

If any one should write me for any information they will do me a favor if they will enclose one or more stamps for a reply ; and then be *sure* and sign their name to their letter. Yours very truly,

A. B. MASON.

Great and Wonderful inventions are just within sight, and more marvelous ones are just beyond our ken. Concerning the former, the following from the last number of *Gleanings*, relative to the late visit of bee-keepers to the Dadants, will be read with interest :

> The next day we visited the Dadants, and saw their factory for the production of the beautiful foundation that rivals anything else made in the world, and I had another treat. The Dadants have perhaps the finest factory for foundation in the world. Their output during 1890 was something like 85,000 pounds, while our own was only about 30,000 pounds.
>
> "But why in the world, friends, do you not use steam power, when you are doing so large a business ?"
>
> Our good friend C. P. replied :
>
> "Mr. Root, there is just one thing that makes us hold on. A company is already organized, with a capital of two millions of dollars, to take the Mississippi river at the rapids, you observed, and make it turn water-motors that shall move dynamos to send electricity all over the surrounding country, to furnish power wherever it is needed ; and we would rather have a big wire, and have the power, than to have a steam-engine and be obliged to haul coal away out here."
>
> So you see, dear friends, what there is before us in the future.
>
> You may perhaps know that a company has been incorporated under the laws of New York, and they have already begun the work of digging a very deep canal, parallel with the rapids of the Niagara river, for the purpose of taking advantage of the great descent of the river here for about half a mile above the Falls, and ending near the base of the cataract. When the full capacity of the fall is employed, it is believed that it will be equivalent to 700,000 horse-power, and this at no expense save for repairs, as the supply is perfectly uniform the year round. To do these great things, however, we must work together. No man can accomplish anything by being a Robinson Crusoe. All these great projects and movements are the result of the combined efforts of great numbers of earnest thinkers and workers.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

QUERIES AND REPLIES.

Do Queenless Colonies Gather Pollen ?

Written for the American Bee Journal

QUERY 740.—Do bees gather pollen when they are queenless ?—Conn.

Yes.—EUGENE SECOR.

Yes.—C. C. MILLER.

Yes.—J. M. HAMBAUGH.

Yes.—A. B. MASON.

Yes.—P. L. VIALLON.

Yes.—H. D. CUTTING.

Yes, certainly.—R. L. TAYLOR.

Yes, sir.—J. P. H. BROWN.

They do.—M. MAHIN.

Sometimes a little ; not much.—A. J. COOK.

They do in my bee-yard.—J. E. POND.

Very sparingly unless they have queen-cells.—C. H. DIBBERN.

Sometimes, to a limited extent, for a short time.—MRS. L. HARRISON.

Yes, lots of it, as combs full of pollen in queenless colonies testify.—G. M. DOOLITTLE.

Yes, but not as abundantly, nor in as large loads as those that have queens.—JAMES HEDDON.

Yes, if they have a drone-laying worker, but they never gather much.—DADANT & SON.

Yes; but in small quantities if there is no unsealed brood in the hive. If there is plenty of unsealed brood, the bees gather the usual quantity of pollen.—G. L. TINKER.

Yes ; but not always in a large quantity. Last season, after the honey harvest was over, I had several colonies to turn up queenless, and I did not notice them until about the time I was over-looking my apiary preparatory to putting them in winter trim. These queenless bees had nearly ruined a lot of combs by crowding them with pollen.—G. W. DEMAREE.

Yes ; but more sparingly than when a queen is present.—THE EDITOR.

Frank Leslie's Illustrated Newspaper for the week ending Nov. 22, contains interesting glimpses of Gov. Hill's home, the new Executive Mansion, at Albany, N. Y. It also illustrates Indian craze over the new "Messiah," showing Sitting Bull fomenting disaffection among the Sioux. Other illustrations embrace sketches of the Hospital for Crippled Children in New York, the New Union League Club Building, in Brooklyn, the busy East River front of New York, and other subjects. The leading contribution is an article on "What is Volapuk ?" by Chas. E. Sprague.

New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity for clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

Bird, Bee and Flower.

Not far from the door,
 A sweet flower-bell
Peeps forth from its stalk,
 Of beauty to tell ;
A humming bird comes,
 Sips daily, with glee,
For each other born
 They surely must be.

I hie me away
 To others, with care,
But ere they are reached
 The dear bird is there,
A-kissing each lip,
 In fancy, so free !
For birds those bright blooms
 Most surely must be.

As up from the ground
 A modest, young flower
First ventures to claim
 Th' sunlight its dower,
'Tis quickly espied
 With rollicksome glee,
And blossom and bird
 Each other's must be.

Oh ! rover, so gay,
 In yonder fair dell,
A lover, more plain,
 Is bound by the spell ;
And lover am I—
 Thou plainly may'st see—
Of Flora's fair offspring
 As well as the *bee*.

We'll quarrel not o'er
 These beauties of earth,
This brightness of bloom,
 Where pleasure has birth ;
The heavens mete out
 These treasures so free,
There's bounty enough
 For bird, *bee* and me.

—*Vick's Monthly*. H. A. M. A.

CORRESPONDENCE.

EMPTY COMBS.

How to Store and Protect them During the Winter.

Written for the American Bee Journal

BY W. J. DAVIS, 1ST.

One feature of advanced bee-culture is the proper care of all good worker-combs in the brood-frames, and all white combs in the sections. If it be a fact that 20 pounds of honey are consumed by the bees in the production of one pound of wax, it follows that one pound of new comb should have the value of 20 pounds of honey ; and every pound of such comb is so much capital invested in the business ; and every square inch of good comb should be taken care of.

I am aware that some store reserve combs in empty hives,* some hang them in the cellar, and some store them in paper sacks ; but all of these methods have their objection of improper ventilation, inconvenience, and occupy too much room, especially when one has from eight hundred to twelve hundred to store away for the winter.

I will briefly describe my method of keeping them through the winter, and if need be, through the summer, too, secure from the attack of the wax-moth. I have boxes made of three-eighths pine boards, two feet long, inside measure, and the proper width for the length of the brood-frames. The bottom box, for a pile, has a bottom nailed on, and made deep enough so that the bottom of the frame will be about an inch from the bottom of the box.

In one of the sides, a hole, about 6x8 inches, is sawed out and covered with fine wire-cloth on the inside. This is for ventilation.

Other boxes of the same size are made without top or bottom, and piled upon the first as high as the storage room will admit, or the convenience of the apiarist may suggest. The top box should have a ventilator like the bottom one, and the pile covered with a suitable board. Combs thus ventilated will keep clean and sweet, if stored in a suitable room, provided they have been cleaned up by the bees, after the honey has been extracted.

Each two-foot box will hold 16 combs. In making such boxes, the sides are dropped five-eighths of an inch below the ends, to form the rabbets for the end of the top-bar, and a three-eighths inch strip one and one-fourth inches wide, nailed on each side, even with the ends, to make all tight ; also a strip one-half an inch wide, nailed on the sides, at the bottom, or lower edge of the box, to rest on the 1¼ inch strip of the box under it. An inch strip nailed across the ends, near the top, for handles, is very convenient.

I assort my combs, placing those that have the most pollen in a separate pile, for supplying those colonies that require pollen in the spring, before the flowers yield any.

The advantages of this style of storage are :

The boxes are not expensive, are light to handle, will last a life time, are mouse-proof, and with pure Italian bees to *keep* the combs clean, are moth proof, besides storing the largest number of combs in a given space by piling them up.

This season there will doubtless be a large number of unfinished sections. These should be passed through the extractor, and the bees should be allowed to clean them of every particle of honey ; the propolis should be scraped off, and then packed in section-cases for future use, secure from mice and spiders.

Youngsville, Pa.

WASHINGTON.

Bee-Culture in this New State of the Northwest.

Written for the American Bee Journal

BY C. THEILMANN.

This is my third trip to this great resort in Washington, situated 16 miles west of Spokane Falls. This lake has great curative qualities for many diseases. Some come here sick and go away in a short time greatly improved, and others in perfect health.

The country has greatly improved since my first trip, eight years ago. Spokane Falls was then a small town ; now it is a large city with hundreds of buildings in course of construction, many of which are to be first-class business houses, which will compare favorably with Eastern cities, and even out-do some of them. The Opera House cost $350,000.

The falls of the Spokane River has immense waterpower, and will be the center of Eastern Washington ; there is a big show of minerals and agricultural products on exhibition here this month, which is very good for a new country.

Only one lot of honey is on exhibition, and that is shown by Rev. G. D. Kimke, of Sprague, Lincoln county. The honey is of fine quality, and nearly white. I have taken interest, as a bee-keeper, to visit Mr. Kimke at his range, about 18 miles southwest of this lake. I found him at his comfortable home on what is called Rock Creek, but could not find water in it, (as many of the creeks in this Big-Bend country of the Columbia, disappear for some distance, and come to the surface again).

Mr. K. was much surprised and happy to meet an Eastern bee-man. He has a nice little apiary, and the only one in this county. Last year he had to feed his bees during the whole season, on account of the great drouth. This season he secured about 10 pounds of surplus honey to the colony, besides their winter stores of about 10 pounds each, which he says will be enough, as their winters are shorter than in Minnesota,

Mr. Kimke is working his bees on scientific principles, and does not think that over 50 colonies could be profitably kept in one place, and even then honey-producing plants should be cultivated, of which he has already a number of varieties, such as sweet clover, spider-plant, Rocky Mountain bee-plant, etc. He has on his own land some native Rocky Mountain bee-plants, the only difference being in the color of the bloom ; it is a purple ; he had also some blossoms of plants with yellow flowers, which he found in the Yekima country, on the eastern slope of the Caskade Mountains. All the kinds of this Rocky Mountain bee-plant resemble each other, except the color of the bloom.

The bees that my son kept here in 1883 and 1884, averaged about 25 pounds of surplus, and increased from 2 to 3 colonies in the two seasons. On the whole, it is doubtful whether bee-culture could be made much of a success in this Big-Bend country, except in some favorable spots, as the whole country is too dry, and has not enough natural honey-producing trees and plants. It is somewhat better for fruit-growing than Minnesota, but it is a farming country. It is too uneven and spotted; that is, rock, intermingled with good land. My advice to every one who has a good home and comfortable living, to stay and be contented, and not listen to boomer's stories.

Medical Lake, Wash., Oct. 18, 1890.

SOMETHING NEW.

The Queen-Restrictor, and its System of Management.

Written for the American Bee Journal

BY C. W. DAYTON.

This new apicultural fixture began its existence in my apiary seven years ago next March. At that time I was looking for a practical device that would confine the queen without certain portion of the hive, to avoid the presence of brood in the surplus, and the propagation of brood and bees to support, when there was no expectancy of there being any honey to gather.

After some meditation upon the subject, the idea suggested itself to me, instead of guarding apartments of the hive from the queen, as is usually done, why not restrain the queen from the apartments?

With this idea as an incentive, I devised a fixture for this purpose. After six years of study and experiment upon the original fixture, during which time it has often been added to and improved, I give this description, for the inspection of bee-keepers, of an entirely new and original fixture to be used in the apiary, and an entirely new and original system of management for the production of honey. I say new and original, because the method originated with me, and has never before, so far as I can find out, been published or practiced by any person in the world.

I am convinced, from extended application and tests, that with its help more honey can be secured in better shape, and with less labor, than can be obtained by any other known method.

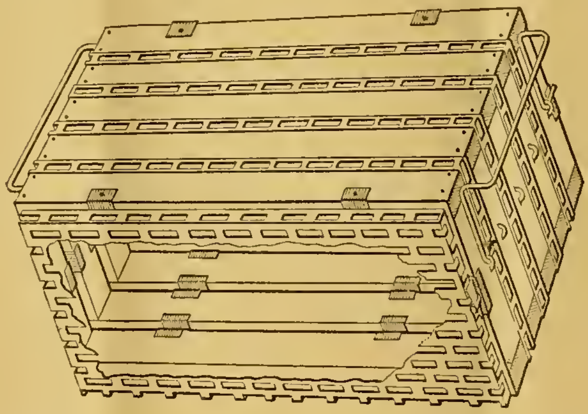
My idea, in the original conception, was based upon the contraction of the brood-nest without material change in the usual hive-space.

That the queen may be likened to a pivot which may admit of adjustment, so as to turn the laws of the hive to the apiarist's immediate advantage.

That honey should be stored as near to the brood as is possible, and the interference of the queen prevented by establishing a defined limit to her operations.

That the reversible hive is an idea that is too broad; and the reversible frame an idea that is too narrow, for practical, or practicable, application or use.

My experiments along this line have been in an untraversed field; and in bringing out the "queen restrictor," is provided a gateway through which others may enter for further exploration and discovery.



The accompanying engraving shows my plan for fastening brood-frames together, and the arrangement of strips of perforated zinc at the bee-spaces, and on the outside frames, altogether, to form an apartment in which the queen may be confined upon a desired number of brood-combs. The side-sheet of zinc has been cut away to show the operation and form of the clasps that hold the strips of zinc upon the frames. These clasps are constructed of No. 14 wire, now, instead of flat pieces of metal.

By this arrangement the queen may be confined upon any desired number of brood-combs, by lengthening or shortening the clamping-rod and reversing wires, as may be necessary.

By confining the queen upon four or five combs she will keep them filled solidly with brood, while the combs that may be situated just outside of the zincs will be filled as thoroughly with honey.

The failure of queen-cells is accomplished by reversion, at a season prior to the formation by the bees, of their fixed notions of swarming. This device may be reversed as simply and as quickly as to reverse a single reversible frame, and the time required is about one hour for forty hives.

By reversing often, the bees get queen-cells only started, and they are then destroyed before they have settled down to the idea that they *must* swarm. It is of far greater advantage to check the idea of swarming than to prevent the issuance of the swarm, as bees that prepare to swarm seldom work, but loiter around the hive while honey in the flowers is going to waste.

By reversion, the combs are caused to be extended to the bottom bars of the frames, making it possible to get as much brood in four or five combs as is usually contained in seven or eight.

There is quite a difference in opinion as to how much to contract the brood-nest during the harvest, but one thing is certain that it is very unprofitable to have as unreasonable an amount of brood as there often is during the latter part of the honey harvest; nor do I want brood scattered through a whole hive-full of combs. The aim is to have few brood-combs, and those combs full of brood, and the combs for honey full of honey. The plan of caging the queen consists in attaching the two sheets to the outside frames.

The narrow strips remain upon the frames from Spring, or through the winter, like a permanent attachment, though they may be removed at any time a necessity occurs. Simply fasten the side sheets in their allotted positions, and the queen is almost certain to be on one of the combs which are fastened together. I do not hunt for the queen, nor clip the wings of the queen. The next time the hive is opened the few combs that remain outside of the Restrictor will show where the queen is, by the presence or absence of fresh laid eggs.

Formerly, I practiced spreading the brood, frame by frame, horizontally. Now, it is performed by reversing the Restrictor, and is performed without tearing the brood-nests apart, to discourage the bees or chill the brood; but by their reversion, which is as simply and quickly done as to lift an ordinary reversible frame from the hive—turn it over and place in hive again.

The inversion places the empty cells at the bottom of the combs, at the top in the most inviting position to be filled with eggs. As the honey, that, before inversion, was above the brood is now below, it will be moved above again, leaving more empty cells to be brought above to be filled with eggs.

The frame top and bottom bars are alike, without projecting arms, and, when they are not in use in the Restrictor, are provided with single frame-reversing wires to hang upon the rabbets, the same as other frames.

Up to swarming, or to the opening of the honey harvest, the queen is allowed the whole hive, including the Restrictor, and by the time she fills eight frames with brood, and attempts to go outside the regular brood-combs to lay eggs in drone-cells, it is time to adjust the zincs for her restriction.

It should be observed that, with the use of this contrivance, the *regular brood-combs only* are different from the frames now in general use; and, by arranging these, the most contractable, reversible and exclusive system of management possible may be practiced.

Perforated honey-boards are dispensed with, and the sections or extracting-combs are filled in on both sides of the Restrictor, or alternated with the extra brood-combs, and if the combs contain drone-cells, it is all the same, for the queen does not get the chance to lay eggs in them.

The invention of the Restrictor was an easy matter, but it has taken me year after year of study and experiment to discover the uses to which it might be put.

Clinton, Wis., Oct. 15, 1890.

BEES ON TRIAL.

The Farcical Outcome of the Experiment.

Translated for the American Bee Journal

BY REV. STEPHEN ROESE.

It seems war is not waged in this country alone against bees and bee-keepers, but in the old fatherland also.

In Alsace-Lorrain, the one-fifth territory taken from France by Germany, at the close of the Franco-Prussian war, in 1870, and annexed to Germany, quite recently a rich castle-owner, with eight prominent nurserymen, filed a bitter complaint against bees and bee-keepers before the Legislature of Alsace-Lorrain, stating that bees, when honey-pasture gets short, throw themselves upon fruit and crops, causing great destruction of the same. The petitioners pray for the Legislature to enact laws to restrict the increase of colonies in that Province, to a certain number.

Representative Adam presented the petitions of the eight nurserymen, which were referred to a commission that reported that the petitioners were laboring under mistaken ideas, and were blaming bees for what wasps, sparrows, ants, and rains were doing. Bees having no teeth would suck only the juice of fruit and crops, after such had been pecked and eaten by wasps, ants and sparrows.

A hot debate ensued on both sides. Representative Gunsert claimed that, according to the newly-enacted law on apiculture, in 1888, the number of colonies could not be limited in any apiary, and as it was a further proven fact that bees had proved a blessing, instead of an injury, in regard to fertilizing fruit and flower blossoms.

Representative Wehrang said, "I cannot see why the number of colonies of bees should be reduced in this Province, because some citizens claim that they do injury to fruit. Why is it that fruit-growers are practical apiarists at the same time, and keep their hives right under the shade of their fruit-trees? Because fruit and crops have been injured by wasps, ants, sparrows, or rain, and bees have been seen only to suck them, in other countries! The Governments, like Baden, protect and aid apiculture by 3,100 marks annually, and shall we aid in putting it down?"

Under-Secretary Von Schrant spoke earnestly, saying: "It seems that the cause of apiculture has found more defenders in this body than friends for the petitioners. We have called for a discussion on the subject, and the majority seems to be in favor of clearing the bees from the criminal accusations, as fruit and crop destroyers. The law of 1888 restricted bees to a certain distance from highways and dwelling houses; and the alleged crime of bees, that they suck the juice of the already-destroyed and spoiling fruit, the work of ants, wasps and sparrows, is not so great after all. Factories are turning our beautiful cities into smoke-nests."

After this speech Representative Ostermeier withdrew his motion, and the proposition of the commission was accepted, that the honey-bees should not be restricted in their rights at present, as the earth has room for all.

Maiden Rock, Wis., Oct. 26, 1890.

EXPERIENCES.

Ups and Downs of Apiculture.

Written for the American Bee Journal

BY W. L. MARSHALL.

Almost everybody and everything, in this mundane world of ours, have their ups and downs. The merchant, the miller, the farmer—yes, and even the bee-keeper—and no doubt the editor can call to mind some time in the past when he has been badly *downed*, and, may be, he has had some of the "ups" in times past, so that he can think and hope, and hope and think, that still there may be some "ups" for him yet.

Almost every one will remember the first colony. This first colony is, in my opinion, the bee-keeper's first "up." Then the new ideas and inventions which work their way into his swollen head are his first "downs." If he is successful in getting his new inventions before the public, there is ninety-nine chances out of every hundred that the many who are foolish enough to invest in the so-called new invention get badly downed.

Well, I keep bees, and you will not be surprised if I should tell you that I have had my "ups" and "downs." About six years ago I bought my first colony of bees, and many happy hours I spent that summer lying in front of the hive and watching the loads of (supposed) honey which the busy little workers carried on their legs. In my dreams I could hear the humming of the same, and also the puffing of the engine in my new hive-factory, turning out hundreds of hives, and thousands of sections each day. Great stacks of comb-honey stood before me, selling at 25 cents per 14 ounces.

I also dreamed that my head was a foot-ball, being kicked around by the bad boys of the town. But my vision vanished with the darkness, (that is, all but the foot-ball part), and I found myself calling for one drop of water to sooth my swollen head.

But times have changed. My one colony of inferior hybrids has changed to fifty colonies of beautiful Italians. My wonderful alternating, convertible, double-walled hive has changed to the simple dovetailed-hive, without honey-boards, using thick top-bars to prevent brace-combs. And I am keeping bees on the Dr. Miller common-sense plan. These have been my "ups."

And now, friends, let me tell you that the worst I have ever been "downed" since I commenced keeping bees was, when I destroyed three beautiful Italian queens, in order to test the wonderfully prolific Carniolans. I found that in this locality these were not to be compared with the Italians in any way. And in the same apiary, and under the same conditions, they were badly "downed" by the Italians. I also notice, upon reading Mrs. Harrison's article on page 728, that the whole State of Illinois has been "downed," and Iowa is allowed to carry off the "blue," at the State Fair.

The Nebraska bee-keepers do not allow any such thing to happen, and when Iowa comes to our State Fair with their fancy gilt pails, they simply say, "It is of no use, as our products will not compare with this wonderful display. We will have to go to the Illinois State Fair in order to keep up our reputation as honey-producers." Why, Mrs. Harrison, do you doubt that that grain was raised in Nebraska? What surprises me is, that your people do not send here for more grain, fat hogs, horses and cattle—yes, and bees and honey, in order to make a State Fair worth seeing. And we also have a little woman out at Columbus, who keeps bees, and we think that by following her example, some of you big Eastern bee-keepers might profit thereby.

Crab Orchard, Nebr.

BEE-ESCAPES.

The History of their Invention and Practical Use.

Written for the American Bee Journal

BY C. H. DIBBERN.

On page 649 of the BEE JOURNAL for Sept. 27, Mr. S. A. Shuck has an article on this subject that is misleading, if not entirely unfair. As to the invention of the old vertical, cone escapes, I have never claimed anything, although I tried in various ways to improve them. Though Mr. Reese's claim to it has been disputed, I think it justly belongs to him. But this and all other escapes for the purpose of freeing surplus-supers of bees, were defective, and unsatisfactory up to the time I brought out my horizontal bee-escape, as described on page 798 of the AMERICAN BEE JOURNAL for 1889.

Up to this time, Nov. 15, 1889, no similar escape had ever been described in any of the bee-papers, or had ever been used by other bee-keepers, to my knowledge, and I therefore claim that I am the original and only inventor of the horizontal bee-escape. Mr. Reese has conceded this point, but claims to have improved it by placing it inside the board.

When it is remembered that I described my first device to him, which was a horizontal escape, placed inside the space usually occupied by the board, and afterwards described my later design, it became an easy matter for him to unite the two, and claim it as an improvement.

It is true that some of my first designs did not prove entirely satisfactory to me, although they worked as well as any other that were then making an appearance. I had secured patterns of all the escapes I could get, but somehow some of the inventors were very shy of me, and failed to send me their models or descriptions. Those I did get were of no use to me, as they proved entirely unsatisfactory.

After many experiments during warm weather, I hit on my present escape, and not as Mr. Shuck states, patterning after all others. Now, as a matter of fact, my escape is entirely different from all others.

Mr. Shuck tries hard to make his readers believe that my new escape will not clear a super of bees in from two to three hours. He states that I must have a different race of bees from his, as his escape will not clear the cases, during the working season, in less than three or four times that long. Now, mine has continued to do this right through the season, and it has never failed to do the same for others, that I have heard of. Strange, is it not?

Well, I should say that Mr. Shuck has very "contrary" bees, or else his escape is of but little account. Mr. Shuck pretends to know all about my escape, and intimates that it is "no good," and at the same time admits that when a friend offered him one of my old style escapes for trial, he was so prejudiced that he would not take it.

Now, what is all this malice that constantly crops out in Mr. Shuck's article about? What have I done to make me the target for articles like his? I have freely given the bee-fraternity an invention, that in other occupations would have been worth thousands of dollars. I could have patented my first device, and it would have covered the entire ground. This I did not care to do, as I wanted bee-keepers to have the invention at once, and to have it free. All that I ever asked was, that I have the credit of having invented the *Horizontal Bee-Escape.*

Why, then, should such men as Mr. Shuck, try to make out that somebody else invented it, or to belittle the invention? Mr. Shuck claims great things for a little escape that he says he can carry in his pocket, being only 1¼x2½ inches. My experience is that such small escapes are a failure. But allowing it to be a success, is it not a horizontal escape, and would it not come under my claims? Ordinarily one would think that he need not lay awake nights to defend what he had given away, but such does not yet seem to be the case.

Milan, Ills.

WINTERING.

Methods of Wintering Bees In-Doors and Out.

Read at the Southwestern Wis. Convention

BY CHAS. E. ZILLMER.

Wintering bees is one of the most important things in bee-keeping. In this locality I prefer in-door wintering. By in-door wintering, I mean to put the bees into a good cellar, where the thermometer will not go below 45 degrees.

In the first place the colony must be well supplied with young bees, that is bees that hatch out in October. When I have a strong colony to begin the winter with, and all are old bees, I am sure to lose them. I have wintered quite small nuclei with success, while the strong colonies of old bees, as a general thing, came out weak in the spring, and kept on dwindling.

This shows very plainly that the old bees cannot endure the cold spring days that we are almost sure to have in March and April. Then what must we do to have young bees to go into winter quarters? If we have a late Fall, and there is honey enough coming in to keep up breeding, it is not necessary to feed them; if it is otherwise, the bees should be fed just enough to keep up breeding. No matter how strong the colony is, if the bees are all old, the colony is not fit to go into winter quarters.

It is not necessary to feed long before the bees are put into the cellar; just enough to give them time to hatch out a good supply of young workers, before they go into the cellar.

I would not have much brood in the combs when I put them in the cellar; for it is sure to disturb them, when in the cellar, with brood hatching. About the last of September is the right time to feed bees in this locality, if feeding is necessary. I have had success in wintering bees when they were young. We often wonder why one colony winters better than another. It is on account of the age of bees, and hence we must have young and vigorous bees to go through the long and trying winter, and most of all in the Spring months. When the bees are old and feeble, they die before the brood hatches. If they were young bees they would stand it all right. I say this, for I have had experience with young and small colonies, and have had strong ones, only the bees were old, and the small colonies would get ahead of the strong, but old ones, every time.

The next point is, we must have good honey for winter stores. I prefer nice, sealed basswood honey for winter, although nice, ripe buckwheat will do. I have had success with feeding granulated sugar early enough, so that the bees could seal it before much cold weather came. But good basswood honey is my preference. We must have good honey. With a colony of young workers, about 30 pounds of nice, ripe honey, and a good, dry cellar, well ventilated, are desirable conditions in order to successful wintering. I can winter a colony of bees just as easily as I can a cow or a horse.

In this locality I prefer in-door wintering. A good dry cellar is the best for such purpose, as it keeps the evenest temperature, while a building is more or less subject to changes. We always have a warm spell in February, and the bees in a house would be sure to be aroused, while those in a cellar would be perfectly dry.

After this warm spell we generally have more winter, and this is death to the bees out-of-doors, or in a house—while those in a cellar would know nothing of such changes. In a locality where the winters are steady, I should prefer a bee-house, as I think it could be kept much drier than a cellar. But for this locality, I would take the cellar every time.

In wintering bees out-of-doors, I have not had much experience; but in the winter of 1888, I had 10 colonies left over that I did not have room for in the cellar, and so I left them out-of-doors. I set them close together, and put corn-straw around them. In the spring, when I opened them, 3 colonies were dead, and the rest were very weak and diseased. The 3 died of diarrhea. Then I began to take those in the cellar out. These were strong, not having had the least bit of diarrhea. I had 35 colonies in the cellar, and only one was dead, and that died of old age. The rest came out strong, while those wintered out-doors were weak, and dwindled away to almost nothing.

The same winter I had three Root chaff-hives. Two of the colonies in them died of diarrhea, and one came out very weak, and about worked up to a full colony by the Fall; while those wintered in the cellar, in Simplicity hives, gave me 2 swarms each, and about 125 pounds of extracted honey to the colony.

One thing I do not like about the chaff-hive is, that the bees keep in too long in the morning, while the other colonies would be at work, from 1 to 1½ hours sooner than those in the chaff-hives.

As far as heat is concerned, the chaff-hives do not let it in as quickly as do others. But when the heat does get in, it stays there; and the bees in them consumed from 20 to 25 pounds more of honey during the winter than those wintered in a cellar. In single-walled hives the cost is about half as much as it would be in a chaff-hive, and you will save enough honey on 50 colonies, wintered in a cellar, in one year, to build a good cellar; while those wintered out-of-doors will consume from 15 to 20 pounds more than those in the cellar.

Quite a sum can be saved on 100 colonies wintered in a cellar. Besides, the bees come out in better condition. The winters in this locality are too cold for out-door wintering. We sometimes have three weeks of steady, cold weather, so cold that bees would starve out-doors on account of not having life enough to eat; while those in the cellar would be nice and warm, with lots of life, and not eat very much, either.

Those out-doors, on the contrary, would have to eat all they could hold, in order to keep up heat. This is almost sure to give them the diarrhea. No out-door wintering for me, in this locality, and I believe all the bee-keeping friends will agree with me.

Wauzeka, Wis.

FLORIDA.

The Honey-Producing Flora of that State, etc.

Written for the American Bee Journal

BY WM. M. CRUTCHER.

Since writing, on page 644, we have had a light honey-flow, and the bees have filled the hives nearly full of honey—enough to winter on, and they are still at work. They are gathering it from the saw-grass marsh of Lake Apopka, about a mile from our place. I do not know from what plant they are gathering the honey; it is thin, and of amber color.

I was glad to see, on page 695, Mr. Fisher defend orange-blossom honey; it is certainly fine honey. Mr. Fisher said he would like to have me or some other bee-keeper give information on this subject to the readers of the BEE JOURNAL. My experience is limited, and so I cannot tell much. After the palmetto stops blooming, there is no other honey-flow to amount to much.

Bees make a living from various wild flowers after palmetto. Partridge-peas are said to produce honey, but I have failed to see any gathered from it yet. It blooms in July and August, and the woods are yellow with it at that time. After partridge-peas are gone, bees get honey from almost anything, and the saw-grass I referred to above. As to the queen laying after palmetto has bloomed, she only lays enough eggs to keep the colony strong.

The bees can get a good living here in the summer and Fall without much or any feeding, in the high pine-land. It is much better I suppose in other parts of the State.

My bees are hybrids, but they are very docile and easy to handle. I can put my hand on the entrance, and they do not offer to sting at all.

Bee-keeping would not pay in this part of Florida, unless one had from 100 to 200 colonies. Bee-keeping and orange growing would go well together, as a business. My advice to any one that wants to come to Florida to live is, to first come and see if you like the country. A good many people have been badly deceived by "land sharks" here.

Zellwood, Fla.

COMB-HONEY.

My Hive and Method of Management.

Written for the American Bee Journal

BY FRANK COVERDALE.

The inquiry comes to me, "Will not the bees carry pollen into the sections?" If the sections are exposed to the brood-chamber, I answer, Yes. If a small opening, only, is allowed, I say, No.

Now, that I may try and benefit the reader, as I keep no secrets to myself, because in so doing, I but stand in my own light, I will say that my hives are Root's 8-frame Langstroths, just one foot wide, cleated bottom-board, with one board for top, with cleated ends. The section-holders are of the same dimensions, outside measure, as the hives.

The Root section-holders are used in the same, only that I nail on an additional top of the same size as the bottom, making a strong and complete one-tier, wide frame. Six frames, 1⅞ inches in width, are just right.

A follower is used. I take a common house-siding for the purpose, because it is just right to tighten this follower. I have used both screws and wedges, and I think a properly-made wedge is to be preferred. Of course, the bees will stick wax around this wedge, to some extent, though it has not yet given me much trouble. I think that a wedge in the center is sufficient.

Where screws are used at each end and top, it would allow rain to blow in at the square joint (which sometimes does occur), then the wide frames will swell and be apt to make something give. Therefore, I prefer a wooden wedge in the center of the follower; this will hold tightly, and the wedge will slightly spring the follower at the center, and if rain should get in at either end, it will give and do no harm to the case.

This wedge is sure to keep open a bee-space between the follower and case, which I consider of much importance. Behind the follower is formed a passage-way for the bees to pass from the hive where the queen is, to the story from which the swarm first issued.

The oil-cloth spoken of on page 169, may now form a complete inner cover between the bees and the brood-comb above, thus allowing no travel over any part of the section-honey, but over a space formed for that purpose.

The operator must exercise a liberal amount of judgment in regard to the putting on of section cases. When storified, I generally put on the unfinished sections that were on the old colony before swarming, and one empty case of sections beneath the former, and if I think best, still another.

Now, then, the reader will have an idea of the hive I use. It is in every way interchangeable, but not reversible. That I may have full control of the bees is the point that I most earnestly hope to accomplish, and trust that the reader will be benefitted from what I have written.

I do not know that my plan is altogether new, but when I caught a glimpse of it, from such men as G. L. Tinker, Jas. Heddon and others I might mention, I was to some extent filled with enthusiasm, which still stays with me. By this plan the bees are exempt from the swarming fever, a thing so desirable in producing comb-honey.

If one does not wish to use, or have, a peforated wood-zinc honey-board, and have it so arranged, it is not necessary. A strip of peforated zinc can be tacked on the full length of the case, one inch wide, along the under side of the same, and extend through under the follower-board, thus fastening the queen below.

This last idea has just suggested itself to my mind, but the query is, whether the queen may not try to work her way through the strip of zinc, and thus loiter around the sections? Or, will the bees have any influence, through the oil-cloth above the sections, to cause her to lay eggs there? I rather think not. Let us hear from others on this important point. However, I do not consider the peforations any hindrance to the prosperity of the bees.

Welton, Iowa.

INTERNATIONAL.

Report of the Business, Speeches and Discussions.

Written for the American Bee Journal

BY C. P. DADANT.

HONEY PLANTS.

A member—Will it pay to plant for honey?

Dr. Miller—Some weeds are fit for nothing but honey-producing, and we can direct bee-keepers to the places where they grow abundantly, but it certainly does not pay to grow these plants for honey alone.

Question; "Is the Chapman honey-plant really worth cultivation?"

A. I. Root—The Chapman honey-plant gives lots of honey, but I do not believe it will pay to plant it. Better go where honey-plants grow naturally.

Dr. Miller—I do not believe the Chapman honey-plant produces as much honey as it has credit for.

A. N. Draper—I have seen a Rocky-Mountain bee-plant with 35 bees on it at one time, and have noticed that the bees filled up their hives very rapidly on it, where a great deal was grown.

L. C. Axtell—Bees work hard on the Chapman honey-plant, and get a great deal of honey from it, but I do not believe it will pay to grow it; even buckwheat does not pay as a honey-plant, as it is not regular in its yield. Even white clover often fails, as a honey-plant, when the ground is covered with its bloom. I have seen times when there was considerable honey, when the blossoms were not as abundant as usual. It depends altogether on atmospheric circumstances.

Dr. Miller said that there were several kinds of Spanish-needles, and asked which furnished the most honey.

J. M. Hambaugh said that it was the kind that produced the wide burr, that gave the honey.

A. N. Draper said that the Spanish-needles from which his bees harvested honey, had no burrs at all.

Daniel E. Robbins, of Payson, Ills., said that he believed that there was not any difference between the Spanish-needles, except that which was caused by the different circumstances of their growth. Where the plants grew very thick, they had no burrs; while, in other places, burrs were very large.

H. Kellogg, of Alexandria, Mo., said that the Spanish-needles that produced honey had petals, exactly in the shape of those of the sunflower.

J. M. Hambaugh said that his bees gathered very large crops of honey from the Spanish-needles. One colony had harvested 73 pounds from it, in 5 days.

W. F. Clarke asked A. I. Root whether there were any Spanish-needles in Ohio?

A. I. Root—Yes, in swampy places.

Mrs. Hollingsworth — Heart's-ease generally gives a great deal of honey, but this year there was very little from it. Why?

J. D. Adams—For the same reason that other flowers failed in their yield. The weather was against it. I have not seen any flowers but what will produce honey, under very favorable circumstances, while none will yield any, in bad seasons.

SUGAR SYRUP FOR WINTER FOOD.

A. O. Calhoun, of Victor, Mo., said: "We are engaged in the production of honey. May we not infer from what has been said, that it would pay to take off the honey and feed back sugar syrup?

A. I. Root—I would not advise any man to take off honey, so as to feed sugar syrup. Besides the trouble of extracting the honey and feeding, there is a loss in the secretion of wax, which is sure to follow, and there would have to be a big difference between the price of honey and that of sugar. Do not take off the honey to feed sugar. Let it alone.

INTRODUCING VIRGIN QUEENS.

A member asked: Can an apiary be Italianized by daubing a young queen with honey, and then dropping her into a colony just after a swarm has issued?

After some discussion it was said that a virgin queen was intended by the one who asked the question.

Eugene Secor thought that it would work, but he was not sure that the young queen would destroy the queen-cells, and, in such a case, the bees might swarm again with this young queen.

Dr. Miller thought it would work, but in many cases he thought bees acted like the mule of which Josh Billings said: "If you want it to stay in the field, put it in your neighbors' field, and let it jump in."

President Taylor said that there was no necessity of daubing her with honey, and that if she was introduced at once, after swarming, before the colony recuperated its numbers by hatching bees, the bees would tear down its queen-cells.

CLOSE SPACING FOR BROOD-FRAMES.

A. N. Draper said: "This season I placed 9 frames in the brood-chamber, and only 8 frames in each of the two upper stories. All the hives were of the same pattern, 12 inches wide, inside. Other years I placed only 8 frames in the brood-chamber. In the fall after extracting, I frequently found the brood-nest in the middle, and sometimes in the upper story; 9 frames in the lower story have a tendency to hold the cluster there. I shall try placing 8 frames in the lower and upper stories, and 9 frames in the middle, next summer, and see if the bees do not prefer close spacing for brood-nest."

CARBOLIC ACID.

L. C. Axtell used carbolic acid to stop bees from robbing weak colonies. Sometimes, when working with bees, when no honey is coming in, it will start robbing quite lively. If we take a bunch of grass and wet it, then take the cork out of the bottle of acid and turn it up a time or two against the grass, then mix the grass, through and through, to even it up, then place it around the entrance of the hive—the robbers will disappear. Rub the combs, and around the top, with the grass.

A. N. Draper used carbolic acid to keep the bees from a watering well, and also on robber cloths while extracting, and had no trouble.

Dr. Miller asked if there was any unpleasant odor left.

Mr. Draper said: Yes, for a day or two.

STATISTICS.

The reports being very incomplete, it was decided not to insert them in detail. Fifty of the bee-keepers present, reported their colonies and crop as follows:

No. of Colonies, Fall of 1889	4,883
No. of Colonies, Spring of 1890	4,765
No. of Colonies, Fall of 1890	5,050
No. of Swarms, 1890	685
No. Pounds of Extracted Honey	46,125
No. Pounds of Comb Honey	33,850
No. Pounds of Beeswax	535

AFFILIATED ASSOCIATIONS.

Northern Ills. Bee-Keepers' Association.
Illinois Union Bee-Keepers' Association.
Iowa State Bee-Keepers' Association.
Ohio State Bee-Keepers' Association.
Ontario Bee-Keepers' Association.
Missouri State Bee-Keepers' Association.
S. W. Wis. Bee-Keepers' Association.
Wis. State Bee-Keepers' Association.

DELEGATES.

P. Baldwin, Independence, Mo.
J. W. Bittenbender, Knoxville, Iowa.
W. F. Clarke, Guelph, Ont.
W. S. Dorn Blasor, Higginsville, Mo.
E. B. Gladish, Higginsville, Mo.
R. B. Leahy, Higginsville, Mo.
R. McKnight, Owen Sound, Ont.
Dan Shank, Clayton, Ills.

ANNUAL MEMBERS.

John D. Adams, Nira, Iowa.
A. E. Ault, North Liberty, Iowa.
L. C. Axtell, Roseville, Ills.
L. W. Baldwin, Independence, Mo.
J. W. Barlow, Belfast, Iowa.
E. J. Baxter, Nauvoo, Ills.
L. B. Bell, Brecksville, Ohio.
W. E. Bell, Donnellson, Iowa.
Geo. Bishoff, Burlington, Iowa.
J. Blanchard, Brimfield, Ills.
Levi Booth, Denver, Colo.
A. O. Calhoun, Victor, Mo.
M. M. Callen, Moravia, Iowa.
Chas. Dadant, Hamilton, Ills.
C. P. Dadant, Hamilton, Ills.
A. N. Draper, Upper Alton, Ills.
Joseph Dunbar, Mt. Sterling, Ills.
P. H. Elwood, Starkville, N. Y.
W. J. Finch, Chesterfield, Ills.
B. W. Flanagan, Rutledge, Mo.
E. T. Flanagan, Belleville, Ills.
Wm. Fulton, Keokuk, Iowa.
J. M. Hambaugh, Spring, Ills.
C. E. Hargrave, Lacey, Iowa.
John Harlan, Hillsboro, Iowa.
F. M. Hart, Traver, Calif.
S. P. Heacock, Chillicothe, Iowa.
Wm. Hill, Prophetstown, Ills.
Mrs. Z. Hollingsworth, Montrose, Iowa.
R. F. Holtermann, Romney, Ont.
H. Kellogg, Alexandria, Mo.
G. H. Knickerbocker, Pine Plains, N. Y.
J. B. Lindle, Muscatine, Iowa.
Wm. Lyon, Burlington, Iowa.
Dr. A. B. Mason, Auburndale, O.
D. W. McDaniel, Hamilton, Ills.
Dr. C. C. Miller, Marengo, Ills.
Rev. E. Milleson, Denver, Colo.
Chas. F. Muth, Cincinnati, Ohio.
John Nau, Middletown, Iowa.
John Nebel, High Hill, Mo.
Howard Ogle, Paloma, Ills.
A. Osborn, Mystic, Iowa.
Dr. Jesse Oren, Mount Auburn, Iowa.
E. C. Porter, Lewistown, Ills.
J. T. Powell, Rutledge, Mo.
W. Riley, Breeds, Ills.
Daniel E. Robbins, Payson, Ills.
W. J. Roberts, Keokuk, Iowa.
A. I. Root, Medina, O.
Ernest R. Root, Medina, O.
F. W. Schafer, Eddyville, Iowa.
Eugene Secor, Forest City, Iowa.
S. A. Shuck, Liverpool, Ills.
W. H. Smith, Burlington, Iowa.
S. Glen Spencer, Payson, Ills.
J. P. Snyder, Breeds, Ills.
Henry Stewart, Prophetstown, Ills.
J. C. Stewart, Hopkins, Mo.
B. Taylor, Forestville, Minn.
R. L. Taylor, Lapeer, Mich.
J. A. Thornton, Lima, Ills.
C. B. Turner, Keokuk, Iowa.
J. VanDeusen, Sprout Brook, N. Y.
August Wadartz, Burlington, Iowa.
B. Wells, Fostoria, Ohio.
H. Weyand, Keokuk, Iowa.
J. S. Willard, Bedford, Iowa.
Geo. B. Worthen, Warsaw, Ills.
Jesse Worthen, Warsaw, Ills.

LIFE MEMBERS.

D. A. Jones, Beeton, Ont.
Thomas G. Newman, Chicago, Ills.

LADIES.

Mrs. L. C. Axtell, Roseville, Ills.
Mrs. E. Baxter, Nauvoo, Ills.
Mrs. M. P. Bell, Donnellson, Iowa.
Mrs. Fannie Berthe, Winona, Minn.
Mrs. Levi Booth, Denver, Colo.
Mrs. L Harrison, Peoria, Ills.
Mrs. Z. Hollingsworth, Montrose, Iowa.
Mrs. C. S. Jackson, Sigourney, Iowa
Mrs. E. J. McGavie, Keokuk, Iowa.
Mrs. L. J. Milleson, Denver, Colo.
Miss Cora Powell, Rutledge, Mo.
Mrs. John Springer, Fostoria, Ohio.
Mrs. Geo. B. Worthen, Warsaw, Ills.

HONORARY MEMBERS.

*F. W. Vogel, Lekmanshofel, Prussia.
Rev. George Kleine, Lucthorst, Prussia.
*Andreas Schmidt, Eichstadt, Bavaria.
Rev. John Dzierzon, Karlsmarkt, Silesia.
*Baron A. Von Berlepsch, Munich, Bavaria.
Baroness L. Von Berlepsch, Munich, Bavaria.
*Prof. C. T. E. Von Siebold, Munich, Bavaria.
*Major F. Von Hruschka, Dolo, Italy.
Dr. A. Dubini, Milan, Italy.
Visconti De Saliceto, Milan, Italy.
Rev. L. L. Langstroth, Dayton, O.
*Samuel Wagner, Washington, D. C.
*M. Quinby, St. Johnsville, N. Y.
L. Gerster, Berne, Switzerland.
*T. W. Woodbury, Mount Radford, England.
Mrs. F. A. Dunham, De Pere, Wis.
T. F. Bingham, Abronia, Mich.
E. Bertrand, Nyon, Switzerland.
Frank R. Cheshire, London, England.
Rev. Wm. F. Clarke, Guelph, Ont.
Prof. C. V. Riley, Washington, D. C.
Hon. Edwin E. Willets, Lansing, Mich.
Prof. Wm. Saunders, Ottawa, Ont.

*Deceased.

REPORT OF COMMITTEE ON EXHIBITS.

In a small ante-room, communicating with the Convention Hall, were the exhibits of hives and appurtenances, bees, queens, and honey. By the time your committee came to examine, the articles had been considerably shifted, and in some cases the names had been left off entirely, hence we are not able to give credit to all sources. We submit the following report:

B. Taylor, of Forestville, Minn., exhibited a divisible brood-chamber hive, which he has had in use for over twenty years. The frames are fixed, and hang on nail points. The hive possesses several good features.

James Wallace, of Clayton, Ills., exhibited a queen-cage, and an observation-hive of nice Italian bees.

Charles Dadant & Son, of Hamilton, Ills., exhibited samples of their superb foundation, copies of their "Revised Langstroth," beautiful samples of yellow beeswax, and small packages of their extracted honey.

Bingham & Hetherington, of Abronia, Mich., samples of their standard goods, a Bingham smoker, and a Bingham & Hetherington honey-knife.

S. A. Shuck, of Liverpool, Ills., some very attractive cases of comb honey.

James Forncrook, of Watertown, Wis., samples of nice sections, both open and closed top.

J. Van Deusen & Son, of Sprout Brook, N. Y., fine samples of flat-bottomed comb-foundation.

Jacob T. Timpe, of Grand Ledge, Mich., some beautiful specimens of his five-banded Italian bees. They were admired by all the committee.

E. C. Porter, of Lewiston, Ills., a bee-escape; probably as perfect a working device as anything yet designed for the purpose.

J. W. Bittenbender, of Knoxville, Iowa, a foundation fastener, a novel honey-board bee-feeder, and samples of red-clover honey.

John D. Adams, of Nira, Iowa, samples of extracted honey, both liquid and candied, and from white and red clover.

Joseph Hambaugh, of Spring, Ills., a hive-ventilator and an entrance-screen; also some fine samples of Spanish-needle, linden and clover honey.

A. N. Draper, of Upper Alton, Ills., samples of his square honey-jars, both empty and filled with heart's-ease and Spanish-needle honey.

L. W. Baldwin, of Independence, Mo., a sample-case of nice comb-honey.

The following articles were exhibited by unknown parties: T tins and perforated zinc; also a hive made entirely of plaster-of-Paris. Respectfully submitted,

Dr. Jesse Oren, S. A. Shuck, E. R. Root, Committee.

Both of the daily papers of Keokuk gave good reports of each session of the International Convention, and the following items will show their estimate of those who were in attendance:

Increased interest, and a larger attendance characterized the second day of the 21st Annual Convention of the International American Bee-Association. One-half of the Grand Army Hall was crowded with the delegates, who are an intelligent-looking body of men, and whose utterances and proceedings were marked by the utmost good humor, and courteous consideration of the views and opinions of each other.—*Gate City*, Oct. 31, 1890.

The meetings of the International American Bee-Association, now being held in Grand Army Hall, are very interesting to those who attend, whether bee-keepers or not; and a better-natured, more intelligent lot of people have seldom met in Keokuk.

Samples of honey of every kind are on exhibition — liquid honey, granulated honey, honey in the comb, red clover honey, white clover honey, linden honey from several States, and mesquite honey from Maricopa county, Arizona.

Specimens of beeswax, hives, frames, smokers, bee-feeders, and every kind and shape of apicultural tools and implements are there, and are for the inspection of everybody who cares to see them.—*Constitution-Democrat*, Oct. 30, 1890.

CONVENTION DIRECTORY.

Time and place of meeting.

Dec. 10.—Huron, Tuscola and Sanilac Counties, at Bad Axe, Mich. John G. Kundinger, Sec.

Dec. 16, 17.—Northern Illinois, at Rockford, Ills. D. A. Fuller, Sec., Cherry Valley, Ills.

Dec. 18, 19.—Carolina, at Pineville, N. C. N. P. Lyles, Sec., Derita, N. C.

Jan. 1, 2.—Michigan State, at Detroit, Mich. H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa. H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood. ..Starkville, N. Y.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Honey Crop in Australia.

I began last season with 110 colonies, which increased to 200, and I obtained 16,000 pounds of extracted-honey. This yield would have been much larger, and the increase greater, had I not sold a large number of queens and colonies during the season. My best colony produced 480 pounds of honey. Some winters here are so mild that the bees gather honey all through it. It is very rarely that the queens cease to lay. H. L. JONES.

Goodna, Queensland, Australia.

Poultry and Bees.

I had 50 colonies of bees in the Spring, which have increased to 90, and obtained 25 pounds of honey per colony, netting me $337.50. I intend trying to raise poultry next year, in addition to my bees. T. J. PERRY.

illiamsburg, Iowa, Nov. 12, 1890.

Long Hives.

This week I am preparing my last lot of bees for winter. As the weather is warm, all my bees are flying. On account of my going bee-hunting, and buying up box-hives, I have gotten behind. I arranged a frame for wild bees, small nuclei, box-hives, transferring, etc.

This frame was first used by me in Germany, in 1886, and will hold 4 sections, $4\frac{1}{4}$x$4\frac{1}{4}$ inches. As all know, the German frames are a trifle smaller. My frame is half-size of the Simplicity, with metal corner spacers. I am using both the Simplicity and my own; for the purpose mentioned, there is nothing better. I can take smaller pieces of comb.

These one-half frames can be used cross-ways, if desired, by two division boards. You can use them without extra expense for hives for nuclei, or small swarms, which all bee-men will have. I take four or five little frames cross-ways, then when the colony gets too strong, I take out all the small ones, and put in large ones, keeping the small ones for nuclei, etc. The metal-corner spaces I spoke of, are used when moving bees only, and are like the Hoffman.

Most of my bees are in hives about 11 feet long. I put 8 colonies in these hives. They are made the same as Falconer's chaff-hives, only longer. I winter all of my bees on the summer stands. I would not like cellar-wintering. I can keep my bees just as warm out-of-doors, with less work and expense. My 40 colonies in Germany are packed with heather and leaves, and always winter well. JOHN H. BLANKEN.

Jersey City, N. J., Nov. 10, 1890.

What the Frost Did in March.

There was very little honey gathered in this part of the country this season. I obtained 300 pounds of comb honey, and 40 gallons of extracted-honey from 120 colonies, and it was dark and unsalable at that. The frost in March killed all the honey-yielding flowers. White clover was cut down by it. The black locusts killed the poplar, also all fruit blooms. One could not gather enough peaches, plums or apples to make a dumpling of, within ten miles of this place. E. ISRAEL.

Oak Lawn, Miss., Nov. 9, 1890.

Cotton Honey.

Bees were doing well here until the "cold snap" in the last of February, which chilled the brood and set them back. But March, and the first part of April, were favorable, and they again built up and prepared to swarm. Then we had a long cold, wet spell that reduced them to the verge of starvation, and a number of colonies died. There were no swarms, and little prospect for honey. But during the summer the cotton yielded honey better than usual, and I obtained from the remaining colonies (about 20) 100 gallons of the finest honey. It is almost as clear as water, very thick, and of excellent flavor. "Cotton" usually yields very little honey; but this year it was the honey-plant that saved us. So you see I was not so badly "left," after all. J. M. McDANIEL.

Peoria, Texas, Oct. 25, 1890.

Foul Brood—A Correction.

Kindly allow me to correct some typographical errors in my essay to the "International," which commences on page 762.

In the third paragraph of last column, page 762, insert the word *though* after "This communication did not appear."

In the third line from that, eliminate the word "the" preceding "foul-brood;" and in the third line from that again eliminate "and" preceding the word "doubtless."

In the next column, next page, thirteenth line from top, read *egoistic* instead of "egotistic."

In the tenth line from the bottom of the same column, read "*with* the frames" instead of "from the frames." The others are immaterial. ALLEN PRINGLE.

Selby, Ont.

Box-Hives and Moths.

I commenced with 4 colonies of bees in box-hives, Spring count, and I now have 10 colonies—6 in Simplicity hives, and 4 in box-hives. Those in the box-hives have moth-worms in them. Is there anything that I can do to kill the moth-worms and not harm the bees? I have only 10 pounds of honey this year. I do not think that my neighbors have done much, if any, better. DAVID T. FROST.

Pearsall's, N. Y., Nov. 3, 1890.

[You should Italianize the bees and discard the box-hives; then you would have no trouble with moths. With box-hives and black bees you are almost powerless to prevent their ravages. With frame hives, even the black bees might be helped by lifting the frames, cleaning out the hives, and killing the worms.—ED.]

Hoffman Frames.

I did not go to the Keokuk Convention, and I am all worked up over it. I got ready to go, and then could not, for my work would not let me. I could have cried over it if it would have done any good. I will have to put up with it. I am making some Hoffman frames, to try next season, provided I live and the bees live. I am more than pleased to hear that you all had such a good time, and am glad that I can read in the AMERICAN BEE JOURNAL what was done. H. MANSPERGER.

Lewiston, Mo., Nov. 15, 1890.

☞ The Club List, for 1891, of E. H. Cook, Andover, Conn., is on our desk. He will furnish it free upon application.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891. H. M. SEELEY, Sec.

☞ The Carolina Bee-Keepers' Association, will hold the last session of 1890 in the Town Hall, Pineville, N. C., Dec. 18, 19. A good programme. All who feel an interest in modern bee-culture are cordially invited. Bring or send a full report of the season. Entertainment free.
(Other papers please copy.)
N. P. LYLES, Sec., Derita, N. C.

☞ The Annual Meeting of the Northern Illinois Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House, at Rockford, Ills., on Dec. 16-17, 1890. The President has a good Programme in course of preparation. D. A. FULLER, Sec.

☞ The annual meeting of the Huron, Tuscola, and Sanilac Counties Bee-Keepers' Association, will be held at the Court House at Bad Axe, Huron Co., Mich., on Wednesday, Dec. 10, 1890. All are cordially invited to attend. JOHN G. KUNDINGER, Sec.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
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☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

HONEY AND BEESWAX MARKET.

DETROIT, Oct. 13.—No white honey in the market; dark or fall honey sells at 14@15c.—Extracted, 7@8c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb Southern, 70c per gallon.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

CHICAGO, Oct. 11.—Best grades of honey sell at 17@18c. For brown and dark in uncleaned sections there is a light demand, the prices having to be shaded to meet the views of the few buyers there are for that grade.—Extracted, steady at 7@8c.—demand is good. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

CHICAGO, Oct. 11.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.: 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 8.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 12.—There is a good demand for all kinds of honey. Arrivals are fair of all but comb honey and Southern extracted. Small lots only of each are arriving, and are sold immediately. California honey seems to be as highly appreciated in our market as the best clover honey. We quote choice comb honey nominal at 16@18c per lb. Extracted honey at 5½@8c per lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

BOSTON, Nov. 19.—We quote best 1-pound sections of comb honey at 19@20c.; fair to good, 17@18c. There are no 2-pound sections here. Extracted, 7@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water st.

ALBANY, N. Y., Nov. 22.—We are selling white honey at 17@19c; mixed, 15@16c; buckwheat, 12@14c. The difference in these prices is for different size combs, glassed and unglassed. Extracted, light, 8½@10c; amber, 7@8c; dark, 6@7c. Beeswax, 28@30c.
H. R. WRIGHT, 326-328 Broadway.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

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	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
The 7 above-named papers	5 25	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

☞ The firm of R. H. Schmidt & Co., New London, Wis., has been dissolved by mutual consent, and is succeeded by Page Keith & Schmidt Co., whose announcement may be found on another page.

Advertisements.

For Sale! NEW HEARSE—AT half-price. Or will trade for Bees, Honey, or Supplies. J. H. TATMAN, Connersville, Ind.
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DON'T YOU buy Queen Bees? If you have not tried one of my five-banded, **GOLDEN ITALIAN QUEENS**, YOU should not fail to read what others say about them. Look for my advertisements, and I will let you SEE how well they please.
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Address, **A. J. COOK,**
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JUST the thing needed to create a demand for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics, Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices; following are prices when sent by express or freight; 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time.

We Have a Few Hundreds left, of the Honey Almanac for this year. They should be used this Fall, and therefore we offer them at **one-half** the above prices.

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

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To succeed in Apiculture? Then try the **Nonpareil Bee-Hive and Winter Case.**

Send for Catalogue of prices, and enclose 25 cents in stamps for the new book, "BEE-KEEPING FOR PROFIT," and you will not regret it.

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Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

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Sprout Brook, Montgomery Co., N. Y.
Mention the American Bee Journal.

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WHAT I SAW!

DR. W. W. SATTERLEE'S wonderful Reply to Socialism—regular price, 40 cts.—THE NEW PEERLESS ATLAS, which will be complete in November, and will contain the

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A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

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WE are now ready to receive shipments of **HONEY,** and would be pleased to open correspondence. Liberal advances made on consignments. Prompt returns. Quick shipments of **Comb and Extracted** will meet an active market. Reference on file with the American Bee Journal.

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The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

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On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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NEW FACTORY.

BEE-HIVES, SECTIONS, FRAMES, ETC. We have moved into our new factory, which is the largest and most complete in the world. We make the best of goods, and sell them at lowest prices. Write for free Illustrated Catalogue.

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SOUTHERN HONEY.

WE PAY 5½c per lb. for a good quality of Southern Honey. Cash on arrival of honey. CHAS. F. MUTH & SON,
Freeman & Central Aves., - Cincinnati, Ohio
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THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD

PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Dec. 6, 1890. No. 49.

EDITORIAL BUZZINGS.

Death has claimed another of the most prominent apiarists of the world. Pastor C. de Ribeaucourt died at Lausanne, Switzerland, on Oct. 24, 1890, at the age of 73 years. He died of paralysis preceded by congestion. He was the author of the *Manuel d' Apiculture Rationelle*, of which there has been four editions published since 1871, when the first appeared. He was the President of the National Apicultural Convention, held in 1869, in Lausanne, Switzerland, which we attended in company with our friend Mr. Ed. Bertrand, editor of the *Revue Internationale D'Apiculture*, published at Nyon, Suisse. In fact, he was the father of the organization, and served many years as its honored President. He was a valued correspondent of the *Review*, and an earnest advocate of modern methods and progressive ideas in apiculture, and his place cannot readily be filled. He was an educated clergyman, and for 46 years was a pastor in the Canton de Vaud.

◆

Space at the Columbian Fair.—Dr. A. B. Mason writes thus about the amount that will be required :

> On page 788, sixth line from the bottom of the first column, the types make me say 10,000 instead of 100,000, as I intended to write, if I did not. It looks "kinder" ridiculous to say that we may not need more than 10,000 square feet for the entire honey display, when I said that "I expect to ask for about 3,000 square feet of space for Ohio."

The Doctor's article was copied by a type writer, and these figures were changed and blotted, and as it said "from 10,000 to 150,000 feet," it passed the proof-reader's eyes without detection.

Canadians Not Americans.—On this matter, the Rev. W. F. Clarke writes thus :

> In reference to the paragraph on page 771, of course there is a sense (the geographical one) in which Canadians are Americans. It is the same sense in which Mexicans and Patagonians are Americans. But the geographical is not the only sense in which the term American is used. In this respect it differs from the word European. There is no one nation on the Continent of Europe which claims to be *the* European nation, in the way the people of United States claim to be *the* American nation.
>
> Strictly speaking, the United States is *an* American country ; so is Canada ; so is Mexico ; so is Patagonia. When "the American people" are spoken of, Canadians are not included ; when "the American government" is spoken of, Canada is not included ; when "American money" is spoken of, it does not include the coin or bank bills of Canada.
>
> The idea that Canadians are not Americans is not a "foolish notion," but a matter of fact. The people of the United States should never have assumed the name Americans, and probably would not, but for their ideas of "manifest destiny."
>
> "No pent-up Utica contracts our powers,
> But the whole boundless Continent is ours."
>
> No, it isn't, and probably never will be. At any rate, it will be time enough to set up the claim when it has a legal and actual basis.

Brother Clarke is again mistaken. We who live south of the great lakes *do not claim* to be "*the* American Nation !" We are only (as in one place he correctly says) "the people of the United States."

Canadians and Mexicans, Brazilians and Patagonians are just as much entitled to be called Americans as we are, and we have no wish to deprive them of the honor of such a glorious appellation.

When we go to other Continents, we are all proud to be called "Americans" first, and if further distinction is desired, then we are from Canada or Mexico, from Brazil or Patagonia, or from the United States of Columbia, or the United States of America !

We should not cavil about such hair-splitting and nonsense, but devote our energies to the interests of the pursuit, and its prosperity.

◆

Enraptured.—This is the opinion of one who sent for a sample copy :

> I am enraptured over your beautiful and artistic HOME JOURNAL, and inclose 50 cents for a year's subscription.—A. T. COOK, Hyde Park, N. Y.

We hope the reader will think and do the same as Mr. Cook, after examining the sample sent last week.

◆

The Discovery of Dr. Koch, of Berlin, of a cure for consumption in its early stages is attracting world-wide attention. "Frank Leslie's Illustrated Newspaper" will send a consumptive patient from New York, for treatment, and will print a full narrative of the method of treatment, and its results, in "Frank Leslie's, from week to week.

Secrets for a Nickel-and-a-Dime.—Mr. D. E. Weage, of East Gilead, Mich,, writes as follows :

> Our Post-master has received a large package of circulars like the enclosed, with an offer of a 65 cent book for distributing them. His name is F. Andrews, and he hails from Chicago. Please look him up.

The Circular is about a wonderful bee-hive and bee-book called "Secrets of Bee Keeping." That very title gives him away. There are no "secrets" in bee-keeping now-a-days.

He promises a return of from $25 to $60 from an investment of from $2 to $4, in his hive and pamphlet. The pamphlet is a poor reprint of N. C. Mitchell's, which was published many years ago.

We ventilated the whole thing in last year's BEE JOURNAL, on pages 259 and 323. *Gleanings* and the *Bee-Hive* also ventilated the Andrews bubble nearly a year ago. He will only catch novices by his fabulous stories—but even they should be warned, when it is possible to do so, to keep their nickel-and-dime for some more profitable investment.

◆

☞ The *Bee-Hive*, heretofore published by E. H. Cook, of Andover, Conn., has been sold to W. T. Falconer Manufacturing Company, who will publish it monthly next year under the name of the "American Bee-Keeper," at 50 cents a year. We club it with our BEE JOURNAL at $1.40 for both, as will be seen in our Clubbing List, on page 812.

◆

Supply Dealers who are about to publish catalogues, should be sure to get the prices of books and periodicals correctly stated to prevent confusion. One just received—the first for next year—incorrectly quotes two—a bee-periodical and a bee-book. In the former there is a double mistake, as to frequency of issue and price. Last year some catalogues quoted bee-papers which had ceased to exist for several years. In these progressive days, such things ought not to be allowed.

◆

One of the Most Attractive show windows in Boston, just now, is the apothecary's store at the corner of Washington and Winter streets. The proprietor has hit upon something that draws a crowd around his window all day ; it is nothing more nor less than a hive of Italian bees, one side of which is of glass, exposing the interior to the full view of the crowd. The hive is elegantly-finished, and the honey is of the whitest, and the show is certainly attractive to look at ; but, after all, it is the novelty of the thing that draws the idler as he passes ; if bees were an every-day sight in the country, as they should be, there would be less curiosity in a street-crowd, in Boston, to stop and look at them. —*Exchange.*

GLEAMS OF NEWS.

Foul-Brood.—We give our readers the full text of the new foul-brood law in Ontario, Canada. It is the one Mr. Allen Pringle referred to, in his essay at the Keokuk Convention, and published on page 762 of the BEE JOURNAL. It reads as follows:

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) The Ontario Bee-Keepers' Association shall at each annual meeting, or the directors of the said Association shall, if in the interval between two annual meetings the occasion should arise, appoint an inspector of apiaries, and a sub-inspector for the Province of Ontario, and the said inspector and sub-inspector shall be elected by the vote of the majority of the members of said Association, present at the annual meeting, or the vote of the majority of the directors as the case may be. Any annual meeting may delegate the annual appointment of an inspector and sub-inspector to the newly-elected board of directors.

(2) The said sub-inspector may, when so directed, as hereinafter provided, perform all the duties and exercise all the powers in this Act directed to be performed or exercised by the inspector, and the provisions of this Act relating to the inspector shall be deemed to apply to and include the said sub-inspector.

(3) The inspector or sub inspector on entering upon any premises in the discharge of his duties shall, if so required, produce the certificate of the President of the said Association, that he has been appointed as such inspector, or sub-inspector, as the case may be.

2. The said inspector and sub-inspector shall hold office for one year from the date of the annual meeting, at which they were appointed, or if they shall have been appointed by the directors, then until the next annual meeting after such appointment, and shall be eligible for re-election; but the said inspector or sub-inspector may at any time, subject to the approval of the Lieutenant-Governor in Council, be removed from office by the directors for neglect of duty or other sufficient cause, and in case of such removal, the directors shall without delay appoint a successor.

3. The said inspector shall, whenever so directed by the President of the Ontario Bee-Keepers' Association, visit without unnecessary delay, any locality in the Province of Ontario, and there examine any apiary or apiaries to which the said President may direct him, and ascertain whether or not the disease known as "foul-brood" exists in such apiary or apiaries, and whenever the said inspector shall be satisfied of the existence of foul-brood in its virulent or malignant type, it shall be the duty of the inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives, and all tainted appurtenances that cannot be disinfected, to be immediately destroyed by fire under the personal direction and superintendence of the said inspector, and after inspecting infected hives or fixtures, or handling diseased bees, the inspector shall, before leaving the premises, or proceeding to any other apiary, thoroughly disinfect his own person and clothing, and shall see that any assistant or assistants with him have also thoroughly disinfected their persons and clothing; provided, that where the inspector, who shall be the sole judge thereof, shall be satisfied that the disease exists, but only in milder types, and in its incipient stages, and is being, or may be treated successfully, and the inspector has reason to believe that it may be entirely cured, then the inspector may, in his discretion, omit to destroy, or order the destruction of the colonies and hives in which the disease exists.

4. The inspector shall have full power, in his discretion, to order any owner or possessor of bees dwelling in box-hives in apiaries where the disease exists (being mere boxes without frames), to transfer such bees to movable frame hives within a specified time, and in default of such transfer the inspector may destroy, or order the destruction of such box-hives and the bees dwelling therein.

5. Should the owner or possessor of diseased colonies of bees, or of any infected appliances for bee-keeping, knowingly sell or barter, or give away such diseased colonies, or infected appliances, he shall, on conviction before any justice of the peace, be liable to a fine of not less than $50 or more than $100, or to imprisonment for any term not exceeding two months.

6. Should any person whose bees have been destroyed or treated for foul-brood, sell, or offer for sale any bees, hives, or appurtenances of any kind, after such destruction or treatment, and before being authorized by the inspector so to do, or should he expose in his bee-yard, or elsewhere, any infected comb-honey, or other infected thing, or conceal the fact that said disease exists among his bees, he shall, on conviction before a justice of the peace, be liable to a fine of not less than $20, and not more than $50, or to imprisonment for a term not exceeding two months, and not less than one month.

7. Should any owner or possessor of bees refuse to allow the inspector or his assistant or assistants to freely examine said bees, or the premises in which they are kept, or should such owner or possessor refuse to destroy the infected bees and appurtenances, or permit them to be destroyed when so directed by the inspector, he may, on the complaint of the inspector, be summoned before a justice of the peace, and on conviction shall be liable to a fine of not more than $50 or less than $25 for the first offence, and not more than $100, or less than $50 for the second and any subsequent offences, and the said justice of the peace shall make an order directing the said owner or possessor forthwith to carry out the directions of the inspector.

8. Where an owner or possessor of bees shall disobey the directions of the said inspector or offer resistance to, or obstruct the said inspector, a justice of the peace may upon the complaint of the said inspector, cause a sufficient number of special constables to be sworn in, and such special constables shall under the directions of the inspector proceed to the premises of such owner or possessor and assist the inspector to seize all the diseased colonies and infected appurtenances, and burn them forthwith, and if necessary the said inspector or constables may arrest the said owner or possessor, and bring him before a justice of the peace to be dealt with according to the provisions of the preceding section of this Act.

9. Before proceeding against any person before a justice of the peace, the said inspector shall read over to such person the provisions of this Act, or shall cause a copy thereof to be delivered to such person.

10. Every bee-keeper or other person who shall be aware of the existence of foul-brood either in his own apiary or elsewhere shall immediately notify the President of the Ontario Bee-Keepers' Association of the existence of such disease, and in default of so doing, shall, on summary conviction before a justice of the peace be liable to a fine of $5 and costs.

11. Upon receiving the notice in the preceding section mentioned, or in any way becoming aware of the existence of foul-brood in any locality, the said President shall immediately direct the said inspector to proceed to and inspect the infected premises; provided that when the person giving such notice is unknown to said President, or there is reason to believe that the information in said notice is untrustworthy, or that the person giving such notice is actuated by improper motives, then the said President may require the person giving such notice to deposit the sum of $5 with the President as a guarantee of good faith, before the said notice shall be acted upon, and if it shall prove that said notice was properly given, then the said deposit shall be returned to the person giving such notice; but otherwise the said deposit shall be forfeited to the use of the said Ontario Bee-Keepers' Association.

12. The said Association shall include in its annual report to the Minister of Agriculture a statement of the inspector's work during the preceding year, which statement shall include the number of colonies destroyed by order of the inspector, and the localities where found, and the amount paid to him for his services and expenses for the preceding year.

13. The directors of the said Association may from time to time make such by-laws and regulations for the control and guidance of the inspector in carrying out the provisions of this Act, as they may deem necessary, and the said directors shall also by by-law fix the amount of the remuneration of the said inspector and sub-inspector, but all such by-laws and regulations shall be subject to the approval of the Minister of Agriculture.

Italian Bees carry off the palm. The *Times*, of Fonda, Iowa, has the following from the Rev. R. E. Flickinger, as the result of one year's experience with Italian bees. He says:

In August, 1889, I purchased for $1.00, the first pure Italian bee ever brought to Fonda. She was placed in a weak colony having only four or five combs. It was the lightest colony when placed into winter quarters, but in the Spring it was in better working condition than any of the other colonies, some of which were very strong in the Fall.

On April 7 one comb of brood was taken from this colony, that another hive might be provided with an Italian queen. During my absence in the East, on or about May 25, the colony was divided by Mr. Busby, and a new colony was formed. On July 15, three combs were again removed, and another colony was formed.

The receipts were $24 from the sales of one colony of Italians, and comb and extracted honey. The expenditures were $6, leaving a profit of $18.

It should be added that when combs of brood were removed from the hive for rearing queens, or forming new colonies, their places were supplied by empty ones, of which no allowance has been made in this estimate.

The fact that the experiment was begun with the weakest colony, and the profits from it exceeded those of all the other colonies in the apiary, indicate in a very decided manner the advantage of keeping Italians instead of common bees.

QUERIES and REPLIES.

Cotton for Filling Cushions for Winter Covering.

Written for the American Bee Journal

QUERY 741.—1. Would cotton be a suitable article for filling cushions for covering the brood frames in the winter time? 2. If not, what is the best article for the purpose? 3. About how thick should the cushions be made?—Iowa.

1. Yes. 3. About the size of a small pillow.—A. J. COOK.

1. Yes. 2. Chaff is cheaper. 3. Two inches, more or less.—DADANT & SON.

1. It will do very well. 3. About 2 inches.—J. P. H. BROWN.

1. I have never tried cotton. 2. Chaff, dry sawdust, or dry hard maple leaves.—J. M. HAMBAUGH.

I winter my bees in the cellar, and use no cushion—nothing but the board-cover over the frames.—C. C. MILLER.

1. Yes; cotton is excellent. 2. Wool is the best, but it is expensive. Wheat chaff is cheap and good for the purpose. 3. From 3 to 4 inches.—H. D. CUTTING.

I use cushions 4 inches thick, filled with fine, dry basswood sawdust, and like them better than anything I have ever tried.—G. M. DOOLITTLE.

1. Yes; but why use such expensive material? I consider oat-chaff or any similar material just as good. 3. One inch is thick enough.—C. H. DIBBERN.

1. I would not use any cushions at all. If I did, I would make them from 4 to 6 inches thick, and fill them with chaff.—JAMES HEDDON.

1. Cotton is no doubt a very good article, but as there are other materials equally as good and much cheaper, I would give them the preference. 2. Chaff seems to have the preference. 3. Two or more inches.—P. L. VIALLON.

1. I fear it would be too retentative of moisture, though I have never tried it. Either chaff leaves, or ground cork, are considered good. 2. Five or 6 inches.—R. L. TAYLOR.

I believe that it pays to winter bees in a cellar or cave, anywhere in Iowa. If that is done, you do not need the cushions. I have never used cushions, and cannot answer the questions.—EUGENE SECOR.

1. Cotton is a fairly good substitute, but not the best, in my judgment. 2. Dry forest leaves, chaff, cut straw or hay, or any substance that will not easily retain moisture. 3. Three or 4 inches.—J. E. POND.

1. No; it would gather dampness. Wool might answer the purpose, but it would be too expensive. 2. Chaff, wheat, oats or clover, whatever kind is to be had. 3. Three inches; so that they could be spread evenly over the frames. If stuffed hard and round would be worse than nothing.—MRS. L. HARRISON.

1. A cotton pad, no doubt, would answer the purpose, but it seems to me that it would be more costly than prudent economy would dictate. In this climate (Kentucky), the air is very damp during a greater part of the winter months, and I have found that nothing is cheaper and better than wheat chaff. 3. The cushions should be about 6 inches to give the best protection.—G. W. DEMAREE.

1. Cotton would answer the purpose. 2. Perhaps the very best material is cork-shavings. Dry sawdust does very well. I would prefer it to cotton. Several thicknesses of old ingrain carpet is very good, and an old rag carpet answers a good purpose. 3. Not less than 2 inches, and as much more as practicable.—M. MAHIN.

1. I have never used cotton for the purpose. 2. I think chaff or dry planer-shavings would be better and less expensive. Forest leaves, if dry, are also reliable for a winter covering over the brood-frames. 3. From 4 to 6 inches. I prefer, however, to put two thicknesses of coarse cotton-cloth on the frames, flat (no sticks beneath for passages), and then put on the absorbent, to be used loose where it can be done. Single-walled hives may require cushions, or rather sacks, filled with the above materials.—G. L. TINKER.

Ground-cork for winter-packing is not only cheap, but receives the highest commendation by those who have used it.—THE EDITOR.

Michigan State Convention.

The Programme of the 24th annual convention of the Michigan State Bee-Keepers' Association, which is to be held in rooms of the Normandie Hotel, Detroit, Mich., on Jan. 1 and 2, 1891:

FIRST DAY, 9:00 a.m.—Call to order. Appointment of Committees. Reception of new members and payment of dues.

"The best all-purpose queens, and the best manner of rearing them—W. Z. Hutchinson, editor of the *Bee-Keepers' Review*, Flint, Mich.

Discussion—"Are apicultural inventions in demand or in excess?"—Ernest R. Root, junior editor of *Gleanings in Bee-Culture*, Medina, O.

Discussion. Question-box.

1:30 p.m.—President's Address—Prof. A. J. Cook, Lansing, Mich.

"Foul-Brood"—Hon. R. L. Taylor, of Lapeer, Mich.

Discussion.

"Is profitable bee-keeping a thing of the past?"—T. F. Bingham, Abronia, Mich.

Discussion.

"Honey statistics and their advantages to the bee-keeper"—G. H. Knickerbocker, Pine Plains, N. Y.

7 p.m.—"In what do we profit by the importation of bees?"—D. A. Jones, editor of the *Canadian Bee Journal*, Beeton, Ontario, Canada.

Discussion.

Question-box and volunteer contributions.

SECOND DAY, 8:30 a.m.—"Benefits to be derived from Apicultural Associations"—R. F. Holterman, Brantford, Ontario.

Discussion.

Opening of the Question-box.

Volunteer contributions.

"Cellar *vs.* out-door wintering"—Dr. A. B. Mason, Auburndale, O.

Discussion.

1:30 p.m.—Selecting the next place of meeting.

Election of officers.

Report of Committees.

Financial report of the Secretary and Treasurer.

Miscellaneous business.

"Apicultural Journalism; its past and future"—Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, Chicago, Ills.

Discussion.

"Benefits to be derived from honey exhibits"—R. McKnight, Owen Sound, Ontario, Canada.

Followed by discussion, and a general good old-fashioned visit, until adjourned.

This programme can be varied to accommodate circumstances, and we shall be glad to entertain any subjects that may come up under the head of Volunteer Contributions. Let none stay away because their favorite subject is left out, but let any one prepare a short, spicy essay, and come prepared to defend it, for bee-keepers as well as doctors disagree. There will be reduced rates on all the railroads, and the large hall; and reduced rates have been secured at the Normandie Hotel. This is a first-class house, centrally located, and will make grand headquarters for us, with the place of meeting under the same roof. Come and help make, and enjoy one of the best conventions ever held in the State.

GEO. E. HILTON,
Assistant Secretary.

Honey in a Church Roof.—The Hartford, Conn., *Courant* of Nov. 22, 1890, thus describes the capture of 200 pounds of honey in the roof of a Congregational Church of that city:

Two hundred pounds of honey on the roof of a church was the discovery made yesterday afternoon in this city. There may be a hundred more pounds where this came from, and it is all of the very best kind, stored by Italian bees. Early yesterday morning C. L. Bullock, the steeple climber, and his assistant, A. H. Jones, ascended by ladders to the roof of the Windsor Avenue Congregational Church. On the top of the front wall, running on both sides from the eaves to the ridge-pole, is a hollow wooden casing which protects the wall, and which is covered with tin. For four or five years the bees have been about the church, and it was known that their home was in this snug little apartment.

The first work of the hunters yesterday was to lay back the tin covering of the long section. Early in the afternoon the boards were removed at the lower part near the eaves, and there was exposed to view a solid mass of honey three feet long, over a foot thick, and several inches deep. When this had been scooped up, Mr. Bullock thought that he had cleaned out the whole bee-settlement, and considered the haul a good one, more than worth the trouble of the work. Just to make the search perfect, however, another board was taken up further up towards the ridge-pole, and another bank of honey of the same size was found. The whole netted six big pailfuls of the precious sweet. It will net a nice little revenue for the church and Mr. Bullock, between whom the proceeds will be divided.

Mr. Bullock is not satisfied yet, and believes that there may be still another bee-store somewhere in that hollow, wooden casing, and will explore still further.

The place will be sealed up tightly, after all the honey has been taken up, so that no more bees will disturb the worship of the Windsor Avenue congregation. Those that are left there will starve, with their winter supply of food gone.

The two climbers, yesterday, escaped without a sting. Their faces were covered with netting, and their hands with gloves, but, after they had "pacified" the bees by showing them that they "were not afraid of them," as they explained it, the men handled the dangerous little fellows with impunity, brushing them off the combs, as they would so much dust, and going up and down the ladder with several of them perched on their coats and hats. One crawled down Mr. Bullock's neck, "but I knew enough not to pinch it," he said, "and it did not offer to sting."

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CORRESPONDENCE.

RHODE ISLAND.

A Visit to the Apiary of the Agricultural School.

Written for the American Bee Journal
BY C. B. JENKS.

"Little Rhody," although the smallest State in the Union, is trying to hold her own in bee-culture, as well as in other industries.

Her Agricultural School is, I believe, the only one which gives to its students a thorough practical knowledge of bee-culture; a thing, which, it is hoped, will be introduced into other Agricultural Schools, in time.

A friend of mine, who is also a bee-man, and myself, started early one morning in the latter part of July, to visit this apiary, which, with the school, is situated in Kingston, about two miles from the railroad station.

The first thing that met our gaze as we entered the apiary was, a swarm of bees, which had apparently just issued. We found Mr. Cushman, and notified him of the fact. The swarm was a large one, and hung very prettily from a limb, so it was photographed before being "hived."

The hives used in this apiary are the Rhode Island Simplicity, and are winter-proof, ground cork being used for packing. The entrance to the hive is through the bottom of the case, which also serves as a bottom to the brood-chamber. There are nine frames, the tops and ends being partly closed. The super is about half the depth of the brood-chamber, and contains half-depth wide frames, each frame holding four boxes; then, when it is desired to obtain honey for extracting, half-depth, wide frames can be used.

When the hive is closed for winter, small cleats are laid on top of the brood-chamber; over these is laid a piece of muslin, and on top of this a cushion, or bag, filled with ground cork, is placed. These hives present a good appearance, and bees winter in them with good success.

There was one hive placed on the scales, which showed the daily amount of honey gathered by the bees. A partial record of this hive, I believe, appeared in this Journal, of October 4.

In the honey-house was an observatory-hive, which is probably of much interest to some visitors. Mr. Cushman showed us his collection of hives, which is a fine one; showing the variety used by bee-keepers in various sections of the country, and is worthy of the examination of all persons interested in bee-culture, who can see them. This collection was on exhibition at the State Fair.

The apiary as a whole, presented a very neat and clean appearance, and the fine display of honey and bees, at the Rhode Island State Fair, which it furnished, shows with what care and understanding it is managed.

Pautucket, R. I.

SWARMS.

My Method of Making Artificial Increase.

Read at the S. W. Wisconsin, Convention,
BY E. FRANCE.

From the fact, that we can rear a queen from eggs only, that would rear a worker, makes it possible to produce artificial swarms, or colonies, of bees. We can divide a good colony into two or more parts, and let the queenless part, or parts, rear a queen from the eggs, or very young worker brood. Then each part becomes a perfect colony of bees, either as a small nucleus, such as queen-breeders use—or, an ordinary colony, capable of honey production.

The large colony is the only one that I propose to deal with. As we are not rearing queens for sale, but want our bees to produce as much honey as possible, we try to keep *all* of our colonies as *strong* as we can, and do not permit swarming naturally. So, in the Spring we build up the weak colony first, by taking brood from the strong ones. When we have got them all strong, and our large hives are full of bees, and honey is coming in rapidly, then the bees would be likely to swarm. We do not want them to swarm, as there is no one there to hive the bees.

We make one new colony in place of making two or more parts of *one* colony. We make it from three to six old colonies, according to circumstances. From a good, strong colony, we take, usually, two combs and some bees, being sure to leave the queen with the old colony. We put into the old colony two empty combs, or two empty frames, with comb-foundation starters. We then put the two combs taken from the old colony into an empty hive. Then in the same way we take more combs from other old colonies, until we have enough combs and bees to fill our new hive. Have all the combs full of brood, with a little honey; we do not want this colony to build any combs until they have a matured queen.

For the first two or three days this colony will not do much more than take care of their brood; after that, they are the best honey-gatherers in the apiary. When we visit this apiary again, in a week or ten days, we cut the queen-cells down to one. We clip the wings of all of our queens. We cannot manage out-apiaries in any other way. We make all of our new colonies by division. As we only visit the out-apiaries once in a week or ten days, there is no one there to look after the bees when we are away.

One great advantage in making increase by this method is, we never have any late swarms, with empty hives to fill, for we fill the hives to commence with; and for the last new ones we should take but one comb from each old colony. If the bees do not build the one comb, they will winter without it. But we do not take a comb out of a hive unless there is a fair prospect of their building another.

Platteville, Wis.

DRONES.

Do Swarms Occur before There are Drones.

Written for the American Bee Journal
BY DR. WM. P. CARPENTER.

Under the head of "Queries," on page 740, I find the question asked by some novice, (perhaps like myself), "Do bees ever cast swarms before they have drones in the Spring?"

In answer to this, is the opinion of a number of prominent bee-culturists, whose long experience in the business, judging by their frequent contributions to bee literature, has given me great surprise. I notice that some reply in the negative, and others seem in doubt if such ever occurs.

Permit me to state what occurred among my own bees this season. I wintered 6 colonies; five were good strong ones, and one (a third cast, of last year), quite small; but all came out in good condition in the Spring. Being unable to see to, and handle them when swarming-time came, I was compelled to sit by and allow them to have their own way.

Two of the largest colonies made their accustomed preparations), as I interpreted their movements), to swarm, for a number of days. I sat where I could see them each day, but as I saw no drones, I did not expect them to leave; but, strange to say, they finally swarmed and left me. I had every chance to see that there was not a single drone, nor any drones left among those that remained. I saw no drones *among* my hives until very late in the season, and only a very few then, although every one was *well* provided with honey.

Now, the queerest part of the matter to me, was, that after the two swarms had been gone away some weeks, I discovered robbers at work; and, on having the hives lifted and examined, I found them in full possession of the hive, with every inch of comb stored with honey, but no queen, and only about a pint of bees.

What brought about this state of affairs? Did they rear no queen, or was she lost on her wedding trip? Or, not meeting the admirers she sought, returned home and died of single misery? These are the facts in the case, without guess work.

If any of the older heads can explain, I am open to conviction. The other four colonies cast no swarms this year, and are strong to-day.

Leavenworth, Kas., Nov. 10, 1890.

BOX HIVES.

My Method of Handling Black Bees in Box-Hives.

Written for the American Bee Journal

BY A. N. DRAPER.

As my favorite way of handling a box-hive of black bees differs from any I have ever read of, I will describe it. Before the white clover begins to yield heavily, I drum all the bees out of the box-hive, and either hive them on comb-foundation, empty comb, or select five or six combs of brood from as many other colonies, and mix with the empty combs, and place them on the stand where the box-hive stood.

Then I take the box-hive to a stand occupied by a good, strong nucleus, with a young queen just beginning to lay, or, having filled the nucleus combs with eggs. The box-hive is to occupy the place of the nucleus. Put the queen at the entrance of the box-hive, and shake about a pint of bees off from one of the combs to run in with her. Place the nucleus on a new stand, and the next day let a just-hatched queen from the nursery run on to the combs of the nucleus from above. You will be surprised to see how quickly the box-hive will become filled with bees.

If it is increase that is wanted, this can be repeated several times in a season, especially if there is a plenty of empty comb, or full sheets of comb-foundation.

When the last of October, or first of November comes, and the bees stop breeding, and the brood is all hatched out, I drum the bees out of the box-hive, and drive them on frames of honey gathered by other colonies. Now the honey and wax from the box-hive can be disposed of, as may seem best.

As no one one pretends to buy box-hives, unless it is to increase his stock, I believe this is the most profitable way a box-hive can be managed.

Upper Alton, Ill.

FOUL BROOD.

The Cause and Cure of that Dire Disease.

From Bulletin 33, Bureau of Industries.

BY WM. M'EVOY.

Foul brood is a disease that is caused by the rotting of uncared-for brood. It usually originates in Spring, in weak colonies that have spring-dwindled so badly that they have not bees enough left to cover or care for all the brood; and if the Spring keeps raw and backward, the bees will crowd together to keep each other warm, leaving the uncared-for brood to die and rot in the cells. The brood covered by the bees, in time hatches, which so increases the force of the colony that a wider circle of comb is covered by the bees, taking in the space occupied by the decaying brood. Then the brood that is fed in these cells, where brood lately rotted down, will have to consume their food mixed with the remains of decayed brood; and that is the *real* and *only cause* of foul brood.

Some will say, that many a time they have put combs with decayed brood, in colonies, and never saw any bad results. Very true; but they do such things in the honey season, and put them in the strongest colonies, where the bees will clean them out at once. If we want our colonies to keep in a healthy state, *we must keep all decayed brood out of them.*

Foul brood will be almost a thing of the past when every bee-keeper knows the real cause of it, looks after his bees in the Spring, and sees that the brood is well cared-for in every hive; and those that are not really strong must be crowded up on a few combs by using division-boards. The young bee destroyed by foul brood first turns yellow; as it decays further, it becomes brown, rotten, ropy matter, and many of the capped cells will be sunken a little in the capping, with a small hole in each. The disease is spread by the bees robbing foul brood colonies, and they carry the disease just in proportion to the amount of diseased honey they carry to their own hives.

In the honey season, when the bees are gathering honey freely, remove the combs and shake the bees into their own hives in the evening, give them comb-foundation starters, and let them build comb for four days. In the evening of the fourth day, remove the comb and give them foundation to work out, and the cure will be complete. Fill an empty, two-story hive with the combs of foul brood that have been removed from two or more diseased colonies; close them up for two days; after that open the entrance, and when most of the sound brood is hatched, remove those combs and give the bees starters of foundation in a single hive, and let them build combs for four days. Then, in the evening of the fourth day, take out those new combs and give them foundation to work out.

Let it be remembered, that all these operations should be performed in the honey season, and done in the evenings, so that the bees will become settled down before morning. Before extracting from the diseased combs, all the combs that were not sealed, *must be cut out* of the frames, or some of the decayed brood will be thrown out with the honey. Then, after cutting out the unsealed comb, uncap the sealed honey, extract it, and bring it to a boil. All the foul combs, and the new combs that were built in the four days, must be made into wax, and the dross from the wax extractor *must* be buried, because what runs out with the wax would not be heated enough to kill the spores; and if it were thrown out where the bees could get at it, it would start the disease again. When the diseased brood that was placed in the two-story hive is hatched and the bees are given full sheets of foundation, then they should at once be given a queen-cell, ready to hatch out, or a young queen. Then everything will be all right.

Woodburn, Ont.

CARNIOLANS.

A Further Reply to Criticisms on their Merits.

Written for the American Bee Journal

BY C. J. ROBINSON.

When I lightly criticised Mr. Shuck's first article on Carniolan bees, I was not aware that he gave professional charts on phrenology; but in his later article he volunteers to publish one for me, according to "such rules as are laid down by expert phrenologists." Thanks. I know that personal reflections offered by Professor Shuck are complimentary.

Of course, "hit birds" flutter, and some creatures, when severely wounded, rise and attack; though the wound was inflicted for the same reason that the skillful surgeon wounds—to heal.

The gist of my criticism on Mr. Shuck was, in pointing to his inconsistent statements. He wrote—first line: "In May, 1889, I purchased a select, tested Carniolan queen." This was his first "experience with this race of bees." He did not mention the name of the bees, or the colony he put the queen into. The queen was put into the colony in May. Probably it was before the queen got to laying; and on the 2d day of July, following, (a period of one month plus a few days), he was in the possession of a queen, of a certain race. Then he announces that Carnolian bees had been tested by him, and he found them to be worthless, compared with Italians, and with blacks; and in consequence of his introducing a Carniolan queen into one of his colonies, less than two months before, he estimated that his "crop of honey would be 1,000 pounds short that year."!!! This is just what his record shows, on pages 488-89.

Because Mr. Shuck has such as he names Italian bees, (with different crosses), he fain would, and fancies that his pen has, sent the fame of the justly-extolled Carniolan bees to the shades, "where the woodbine twineth."

In returning Mr. Shuck's personal compliment, I ask this: "Judging him by such rules as are laid down" by sensible mortals—can it be said of him that "he is overbalanced in the direction" of intelligence?

Richford, N. Y.

[This controversy having assumed a personal one, is concluded with the above. To be pleasant and profitable, discussions should be on the merits of the questions involved—minus all personalities. We have omitted considerable that was written by both controversialists, simply because of its personalities. Such are always unpleasant, and of no interest to the ordinary reader.—Ed.]

PENNSYLVANIA.

A Year's Work in the Apiary, and its Results.

Written for the American Bee Journal

BY H. P. JONES.

The flood of 1889 carried away my promising little apiary of 16 colonies, which had survived the winter. They were all in first-class condition, but shared the same fate as 20 new hives, together with smokers and other necessary utensils. Everything was swept away, and the ground on which they stood.

This was discouraging, but did not discourage entirely. I had sold a neighbor a colony of Italians, with an old queen (reared by Prof. A. J. Cook). This colony proved very prolific. It was a swarm from July, 1888; was wintered well, and swarmed three times in May, once in June, once in July, and cast its last swarm on Aug. 5.

I bought a half interest in this small beginning, and gave my personal attention to their care. The first colony gave two fine swarms, and a crop of 70 pounds of comb-honey. Our crop of honey that year (1889), was fair; this year it is not as good. The Spring opened early, and found all colonies strong in both bees and honey, but the opening of the fruit-blossoms brought cold rains, and it continued cold and wet until all the blossoms had disappeared. During this time all was consumption and no production; so by the time white clover began to bloom, the winter stores were about exhausted, and few bees were left in the colonies. Many of the old bees had passed away, the rearing of young bees had ceased, and all the colonies had destroyed their drones.

Prospects looked anything but favorable. While the white clover looked like a little snow-shower on the grass, it contained scarcely any nectar, and the bees seemed to pay no attention to its white, inviting bloom. Next came the basswood; the bees worked on it for two days, and then abandoned it. Thus, but little was stored from basswood. But during the short interval which they worked on it, they started brood-rearing, and by the middle of July a number of colonies were well supplied with bees, but no honey.

Next came what is commonly called milk-weed. All hands were at work, and the sections were re-sorted, most of them filling their supers, but still neglecting their brood-chambers. I say this, because my personal examination revealed the fact. Some of them had their single supers, holding 24 one-pound sections, well filled, and not more than 2 or 3 pounds of honey below. The honey stored was the most nauseous stuff ever gathered by bees. It seemed now as if we must feed our bees or suffer the loss of them.

August 26, the work began on the Fall flowers. Brood-rearing, filling brood-chambers, and work in the sections, all went on at the same time; and had they been in as good condition as the previous year, some would have stored 100 pounds of surplus. But all filled their brood-chambers, and also filled some surplus boxes. This is an excellent, amber-colored, heavy honey.

All of my swarms were late, none issuing until June 10, another July 4, and a few in August. One, of Aug. 13, has 10 frames well filled, but I gave them no opportunity to store any above.

I captured a large swarm of blacks that came from the woods, and gave them an Italian queen; they have their frames well filled. I have, in all, 16 colonies packed for winter. In this section I prefer out-door wintering. My mode of wintering is, after removing the supers, not too early, say the last of October, put a box 6 or 7 inches high on top of the cloth, fill with forest leaves, cover, and say good-bye for the winter. Bees thus stored, having a good supply of honey, and of young bees, will not fail to give good results the following season.

I bought 3 colonies of Carniolans from the Pratt bee-farm, last Spring, and placed one in my own yard, so as to watch closely, and learn their advantages over Italians. I cannot give a report yet, as the one I have was nearly destroyed on the transit, not more than one pint of bees being left; the queen, nevertheless, was in good condition.

They have built up rapidly, and now are a strong colony with 8 frames well filled. One thing I can say, and the entire family can vouch for the truthfulness of the statement (having had quite convincing evidence), and that is, they are *not* stingless.

In conclusion, I will say that the BEE JOURNAL is a great source of comfort, as well as of information. No bee-keeper can afford to be without it.

Renovo, Pa., Nov. 19, 1890.

FOUL BROOD.

Some Details of my Experiments in Its Cure.

Written for the American Bee Journal

BY A. KOEPPEN.

On page 763, (Nov. 15), Mr. Allen Pringle, of Selby, Ont., gives his experience in curing foul brood. My experience has been just the reverse, and so I report the result.

I have been troubled by foul brood for over four years, and have tried all the cures I have heard of. This Spring, in May, I had 37 colonies, and they were all well and in good condition. During the white-clover season, in June, I looked them over and found 7 diseased. I gave them the cure that Mr. Pringle named, but all except one of the sick ones left their hives, and were gone before I knew it.

During the basswood season, in July, I again found 12 or 14 diseased.

To urge them to stay, I put in some foundation; but almost all of them left their hives without any noise that was noticeable, so we could not tell they were swarming out. Mr. Pringle says, give them foundation four days afterwards. Now, I do not see how I could, as I did not know where they were. What he says about curing foul brood in the Fall, seems to me a hard thing, not having enough sealed comb to make the experiment.

Three years ago, late in the Fall, 3 colonies were entirely rotten. I cleaned them out, and gave them empty comb and medicated sugar-syrup. These, the next year, were my best colonies, and they never had the disease again. Some that I cured in July, caught the disease again this Fall. I have fed my bees $8 worth of sugar, but at the same time they seemed in a starving condition. My bees have had to be put together so much, that they have been reduced to only 3 colonies.

I am an old bee-keeper; have been in the business since I was a child. I have been among them, and have kept them, myself, for over 30 years, and do not know what to think of this condition of things. I have always read the leading bee-papers from Germany and this country. I have never heard of such a case before.

Flint, Mich.

JAPAN CLOVER.

Some Facts About this Honey-Plant.

Written for the American Bee Journal

BY DAYTON E. BARKER.

The following article I have taken from the *American Farmer*, treating on Japan clover. It may be of interest to some of the readers of the AMERICAN BEE JOURNAL, should you think it worthy of publication: "I am prompted to send this article by the fact that this same clover is beginning to take a strong hold in Southern Missouri. Wherever it makes its appearance, it spreads very rapidly, and completely covers the ground in a short time. It seems to thrive on any kind of soil; on the highest as well as on the lowest ground, and on the stoniest as well as on the stoneless land. Japan clover is a member of the clover family (*Lespedeza striata*), introduced into the Southern States, and has had much said both for and against it. It is a native of Japan, and is considered of more and more value year by year, as its merits become better known.

"I will here give a description copied from the 'American Encyclopædia of Agriculture,' which says: 'It is a low, perennial plant, not rising much above the ground, but spreading widely on the surface. It belongs to the Leguminans family of plants, which includes the common clover, bean, pea, etc. The leaves are very small, trifoliate, and very numerous. The flowers are exceedingly small, and are produced in the axils between the leaf and stem, and the fruit is a small, flatish pod.'

"Mr. Killebrew says concerning it: 'About the year 1849, it was noticed in the vicinity of Charleston, S. C., the seeds having been brought from China or Japan in tea-boxes. A short time afterwards, it was discovered at a distance of forty miles from Charleston, but growing with great luxuriance on the poorest soils, and retaining vitality in its severest drouths. It is said to be a fine plant for grazing, and being a perennial, needs no re-sowing, and but little attention. On soils unfit for anything else, it furnishes good pasturage, and supplies a heavy green crop for turning under and improving the land."

Mr. Green, of Tennessee, says: "This clover made its appearance in our locality in 1870, and it is fast covering the whole country; it supplies much grazing from the first of August until frost."

If any bee-keeper has had any experience with the Japan clover, as well as with the white clover, I would like to learn what is the difference between the two clovers, and which one is the best honey-producing plant.

St. Joseph, Mo.

PAINTING HIVES.

How and When to Paint—Feeding Bees, etc.

Written for the Prairie Farmer.

BY MRS. L. HARRISON.

The fine Indian-summer weather with which we have been favored of late, and of which we would fain have a further supply cut from the same web, makes the present a good time for painting hives. If it is a little cool, the bees will not disturb the workman, and there are no insects flying to get fast in the new paint. A leaky roof is an abomination to a colony.

For the lower hive we use white lead and linseed oil; for the upper story, Venetian red and oil, with a little white lead added, to give it body. If we wish to vary the color of the hives in the apiary, we use a little burnt umber, more or less. This, in combination with Venetian red and white lead, gives almost any of the neutral tints.

In a late visit to the Dadants, I saw a large collection of blocks painted in very bright colors of green, red, yellow, purple and white. In answer to my inquiries as to what they were for, I was told that hives were formerly painted in different colors, so that queens could distinguish their own hives on their return from bridal tours; but, instead of this, these blocks were now used. They are about two inches square, and six inches in length, with one end cut off diagonally. These blocks are also used to regulate the size of the fly-entrance, either decreasing or increasing it at discretion.

FEEDING BEES.

A poor honey season is a good one to judge of the merits or demerits of bees. When the honey-flow is very abundant, the natives appear to keep up in the race, but during a poor season they are distanced. I have taken off surplus in the Fall from native bees, and found their cupboard bare. Italians in the same condition would have uncapped every cell, carried every drop into the brood-chamber, and been "as snug as a bug in a rug" for cold weather.

There was very little swarming in this locality in the past season, consequently but few colonies need feeding—only six in an apiary of one hundred colonies, and these were principally nuclei, which had been formed for the purpose of rearing queens. The wind were tempered to the shorn lamb, for the days were warm the first of the month of November, the thermometer indicating 60° in the shade I improved these warm days in feeding these small colonies.

CELLARS FOR BEES.

Those contemplating putting bees into the cellar to pass the winter, should give these repositories a first-class overhauling—no make-believe, or promising to do better next time will answer. If the repository is under the dwelling, it should be done away with, for the health of the occupants. Sweep it over-head, sides and floor, and give it a coat of whitewash, for lime is a great deodorizer. I never had any comfort with my cellar until I had a sub-earth ventilator, made of 6-inch tile, bringing fresh air from out-of-doors into the bottom of the cellar. A window hung on hinges is just above the ground, and can be opened as circumstances demand. It is open now, and has been for months, the air continually changing. The tile coming above ground is covered with perforated tin to keep out rats, mice, toads and snakes; and the window is covered with wire-gauze.

WINTERING OUT OF DOORS.

The apiarist in charge of the bees of the Messrs. Dadant & Son, showed us how he prepared bees to remain upon their summer stands. Straw mats, that were made by weaving straw with strong twine, were used to cover the combs—these woven mats are also used, in like manner, by the Muths, of Cincinnati, O. Above the mats, dry leaves are used for packing, and a light fence, made of little boards, and fastened together with twine, is driven into the ground, around three sides of the lower hive, and the space filled with dry leaves. I have used dry leaves for packing, and the bees wintered well.

Peoria, Ills.

NECTAR.

Some Observations About the Flow of Honey.

Written for the American Bee Journal

BY JOSHUA BULL.

In Prof. A. J. Cook's essay read at the Convention at Keokuk, on "The Requisites Necessary to Secure a Honey Crop," as appears in the AMERICAN BEE JOURNAL on pages 776 and 777, he puts forth the theory that the cause of the partial failure of the honey crop, this year, was due to a want of vitality in the clover roots, in consequence of unfavorable conditions for this preparatory work last year.

Now, whilst there may be some philosophy in the Professor's theory, yet I do not think that it covers the whole ground, and may not be even the primary cause of failure; at least not in this locality during the past season, for clover had a luxuriant growth, and an abundant bloom, with us, last summer; and sometimes it yielded nectar freely; at other times, it did not.

I do not wish to take issue, or in any way stand in opposition to our highly-esteemed friend, Prof. A. J. Cook; but inasmuch as he has invited an expression of opinion upon this subject, "in the hope that we may reach a solution," I will venture to offer for consideration some facts gathered from my own experience.

On June 18, 1889, I hived a swarm of bees, and set them on scales; clover was then just getting well into bloom. On the next day the thermometer went up to 92°; on the 19th, they stored 10 pounds of honey; on the 20th, it rained all day, and bees did nothing, but no lightning and thunder accompanied the rain. (Please make a note of this, for I think this has an important bearing upon the subject under consideration.)

On the 21st, the rain being over, the thermometer stood at 72°, and the bees stored 9 pounds of honey. On the 22d, the thermometer stood at 86°, and they gained 8 pounds. On the 23d, the thermometer stood at 82°, and 9 pounds was gathered. On the 24th, the thermometer stood at 96° and 9 pounds was added. Thus in five days (counting out the rainy day) they had stored 45 pounds of honey, the scales being balanced anew every morning, on account of shrinkage by evaporation during the night.

But now there comes a change in the atmosphere. On the morning of the 25th, a dense fog settled down upon us; this, however, soon cleared away when the sun was well up in the sky, and then the day became bright and clear; but the bees were slow in going to the fields. The atmosphere was sultry. At 2 o'clock the thermometer rose to 102° in the coolest shade, on the north side of the honey-house. At night, we found that the bees on the scales had scored only 3 pounds of honey on that day. During the night, between the 25th and 26th, we had a shower, accompanied with sharp, piercing flashes of lightning and heavy thunder, which shook the very earth. The next day, the 26th, was clear and calm, but not an ounce of honey did the bees gather. From this time onward, for the next three weeks, this colony on the scales made an average gain of only one pound per day, or just 20 pounds in twenty days. Meanwhile we had, occasionally, heavy thunder.

In view of the foregoing facts, and many other observations of a similar nature which have come within my cognizance in years past, I am of the opinion that the flow of nectar in flowers is almost entirely dependent upon certain atmospheric conditions. When the conditions are right, nectar will flow freely, even though the bloom may be meager; when they are wanting, nectar will not flow, to any considerable extent, no matter how abundant the flowers may bloom, or whatever other conditions may exist. Other things being equal, I think that the bees will store honey faster, and of better quality, when the weather is quite dry, even too dry for a thrifty growth of vegetation. At such time the nectar is thicker, and does not shrink so much by evaporation, as when, by frequent showers, it becomes diluted with rain-water, which also injures the flavor and color.

Just what the necessary conditions are to insure a good honey crop, I will not attempt to explain, for "I don't know," but I am of the impression that electricity has very much to do with it. If there be just sufficient quantity of that element present in the atmosphere to produce the needful quantity of rain, without much thunder, we get more honey than when we have frequent heavy thunder-storms.

I have noticed that bees will sometimes store honey quite freely when it rains almost every day, if there is not much thunder. On the other hand, they will gather it more rapidly when the weather is quite dry. I have noticed many times, that a violent thunder-storm would (if I may be allowed to use the expression) seem to frighten the nectar out of the flowers; and it generally takes several days, or a week, for them to recover their normal condition. The logical conclusion of my observations would stand thus: When we have frequent storms, with heavy discharges of electricity, in the form of lightning and thunder, the honey-flow is apt to be light; but when there is less thunder and lightning, there is more honey in the flowers. Or, in other words:

When pealing thunders shake the ground,
And rend the air with fearful sound;
Much nectar will not then be found
  Within the timid flowers.
But if the gentle rain descends
Without the lightning-flash, which rends
The drops of nectar from their kens,
  The honey crop is ours.

That is the way it seems to work in this locality, and I would like to know if any one has observed similar results in other places. Who will be the next to rise and explain?

Seymour, Wis.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at ½ price. See page 813 of this paper.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The Carolina Bee-Keepers' Association, will hold the last session of 1890 in the Town Hall, Pineville, N. C., Dec. 18, 19. A good programme. All who feel an interest in modern bee-culture are cordially invited. Bring or send a full report of the season. Entertainment free.
(Other papers please copy.)
N. P. LYLES, Sec., Derita, N. C.

☞ The Annual Meeting of the Northern Illinois Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House, at Rockford, Ills., on Dec. 16-17, 1890. The President has a good Programme in course of preparation.
D. A. FULLER, Sec.

☞ The annual meeting of the Huron, Tuscola, and Sanilac Counties Bee-Keepers' Association, will be held at the Court House at Bad Axe, Huron Co., Mich., on Wednesday, Dec. 10, 1890. All are cordially invited to attend. JOHN G. KUNDINGER, Sec.

CONVENTION DIRECTORY.

Time and place of meeting.

Dec. 10.—Huron, Tuscola and Sanilac Counties, at Bad Axe, Mich. John G. Kundinger, Sec.

Dec. 16, 17.—Northern Illinois, at Rockford, Ills. D. A. Fuller, Sec., Cherry Valley, Ills.

Dec. 18, 19.—Carolina, at Pineville, N. C. N. P. Lyles, Sec., Derita, N. C.

Jan. 1, 2.—Michigan State, at Detroit, Mich. H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa. H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood. . .Starkville, N. Y.
SECRETARY—C. P. Dadant . . . . . .Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon . .Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Ventilation in Winter.

When packing the Langstroth portico-hive in an outer box, or chaff hive, what is the proper size of opening through each, in front, to give suitable ventilation for winter? I pack the hives all around, on top and beneath, except in the portico.

Linneus, Mo. C. F. COLLINS.

[As you do not pack chaff in the portico, the ordinary entrance will give sufficient ventilation for the bees in winter. Then the bees, if wintering well, are almost dormant, and require but little air.—ED.]

Union Bee-Keepers' Convention.

I wish to correct a few mistakes made by the Secretary of the Union Bee-Keepers' Convention, in his report, in the AMERICAN BEE JOURNAL, of Nov. 1, 1890, on page 730.

L. N. Black asked: "How old must a queen be when she mates with a drone, in order to become prolific?" Mr. Wallace answered: "From three to seven days. Then she should lay in three or four days from the time of mating. In other words, a good queen usually lays on the eleventh or twelfth day after she is hatched, if the weather is favorable." This is what I said.

Mr. Lefler asked, "How do you rear the most prolific queens?" Mr. Wallace replied: "I now rear them in the strongest and best colony, by taking the queen out and letting them make queen-cells. When the cells are ten days old, I put a small wire cap over as many cells as I desire to save; this is to keep them from being destroyed after the first one is hatched out. I do not think of keeping the old queen in the hive at the time of rearing, or making cells."

There were some other small mistakes, but they were not worth noticing. The two mentioned make quite a difference in the meaning. THOMAS S. WALLACE.

Clayton, Ills., Nov. 17, 1890.

Liquefying Honey.

Will granulated honey, if heated up to the liquid point, and sealed air-tight, while hot, granulate again; or will it stay liquid? Please answer this in the AMERICAN BEE JOURNAL. MAX STEPHENS.

[If it is heated to 200 degrees Fahr., and then sealed up air-tight, while hot, it will not granulate again while thus sealed up.—ED.]

A Poor Season.

Bees in this section have had a poor season, and a good many who have neglected to feed the bees will have empty hives next spring. I have an apiary of 40 colonies to go into winter quarters with, and I have fed more this season than ever before since I can remember. I started in the spring of 1890 with 30 colonies, all in good condition except two. One lost its queen, and the other was weak. I united them and made a good colony. They increased to 45 colonies, and were doubled up to 40. I usually take 50 or 60 pounds of surplus comb-honey to the colony. I shall not this year have more than 15 pounds to the colony, spring count. I sell my honey in my own and adjoining towns. I get 18 cents for one-pound sections. The season opened up unfavorably. It was cold and wet up to the last of May. We had a short flow of white clover honey, then it came on dry, and the bees just gathered enough to supply their daily wants, then from the middle of August to this date, it has been very wet, and swarms that issued late have starved, when not fed. I have fed all of my new colonies, and part of the old ones. I keep hybrids and pure Italians. Most all in my locality keep black bees.

FRANK A. HOUGHTON.

Harvard, Mass., Nov. 19, 1890.

Drones.

Please answer this query: Do drones ever gather honey and pollen?

Decatur, Ills. R. T. DAVIS.

[No. Nature never intended them to do such work, and therefore did not supply them with the means of doing it. You should get a good Manual and study it.—ED.]

No Surplus Honey.

Score another against Mr. Clarke, who said our brethren across the northern border were not Americans. If they are not, who are they? That is the question. I began the season with 2 colonies, and ended with 7, having lost 2, and got no surplus; but I am not discouraged, as I have not heard of any one who is overloaded with honey, in this section. M. E. WILSON.

Black River Falls, Wis., Nov. 20, 1890.

Insuring Bees.

Please inform me, through the AMERICAN BEE JOURNAL, the name of any Fire Insurance Company that will insure bees, while in the cellar. Also their rates and what value per colony they will insure them for. E. L. PLUMB.

Windsor, Conn., Nov. 18, 1890.

[We do not know of any Company that will insure them. Since their experience, some 16 years ago with Mrs. Tupper, all that we know of refuse to take such risks.—ED.]

Commoners.

If I wrote "consumers" in the 11th line of my letter, on page 780, I never meant it, but *commoners*. "Are drones commoners?" was what I *meant* to write, if it was not so written. Would be sorry to be so ill informed as not to know that drones are *consumers*. If we have bee *pigs*, the drones would surely fill the bill.

T. F. KINSEL.

[The writing was quite indistinct, and looked like *consumers*; so the printer "set it up," and it slipped through. We cheerfully make the correction.—ED.]

Thirty Pounds to the Colony.

I have but a small apiary, 18 colonies, but they are all going into winter quarters in good condition. I have Italianized all of them. This Fall they yielded about 30 pounds of surplus honey, per colony, in one-pound sections. I never disturb, or take honey from the lower story.

JOSEPH G. BANNING.

Brookfield, Mo., Nov. 29, 1890.

Poor Season for Honey.

This has been the poorest season for bees in several years. I have Italian bees, but I formerly had the blacks.

A. M. MASON.

Homer, Ga., Nov. 17, 1890.

Bee-Periodicals.

On page 729 the Rev. W. F. Clarke criticizes the *Canadian Bee Journal* and one of its editors respecting the payment of contributors to bee-periodicals. Permit me to say that I, and not Mr. Jones, am the author of the paragraph which he takes as his text, and that I had in my mind's eye none other than him when I penned it, and the shoe pinched so hard that it made the wearer squeal. I left lots of room for "such men as Prof. Cook, Heddon, Doolittle, Corneil, McKnight, Holtermann, Dr. Miller, and others." One of the above, Mr. McKnight, never accepts pay for any article he writes, and there is more solid, practical sense in one of his articles than in a dozen of Mr. Clarke's wordy discourses.

He says: "It is foreign to the true literary instinct to write merely for pay." Perhaps so, but Mr. Clarke's instinct is "money first and money always," his own statements to the contrary notwithstanding. True, he does sometimes write without pay, but he always has an object, and not always a worthy one, in view, when he does so. I suspect that the present article is one of these, and his object, in this case, was to get a rap at the *Canadian Bee Journal* and its publishers, because they pursue the even tenor of their way without reference to him, and without his assistance. He is possessed with the idea that he, and he only, can run a bee-periodical. As an instance of this, about a year ago he made the statement that he wished that *he* "had continued the AMERICAN BEE JOURNAL." I replied, "Then there would not have been any AMERICAN BEE JOURNAL now."

Why does he bear a grudge against the *Canadian Bee Journal?* When it was started, his advice was not asked, and this he cannot forget. In fact, many of our friends whom we did advise with, told us to leave him severely alone, if we would make a success of the venture. When the AMERICAN BEE JOURNAL reduced its price to one dollar per annum, he said, "It cut off *all* its paid contributors," and he was one of the number. This he told me him self. He should have said that only the "least valuable" contributors were cut off, because a glance at that Journal during the succeeding years, shows that the good ones were all retained. At any rate, Mr. Clarke blamed this misfortune to us, and he has repeatedly stated that we were responsible for the cutting off of his "daily bread" to the extent of $100 to $120 per annum.

He says, speaking of the *Canadian Bee Journal*, "We have only half a bee-periodical when we might have had a whole one, as good as the best," and reading between the lines, we hear him adding: "if you had only taken my advice, and engaged *me* as its editor, as I wanted you to do, when I went to Beeton, and tried to get you to discharge your local editor and engage *me* as editor of both papers." Because we would not do it, see the result! We are "sat down upon," but I think we shall rise without serious injury.

His reference to Mr. Jones I will leave without comment, further than to say that it is a pity that Mr. Jones cannot put into words what he *knows*, as easily as Mr. Clarke can put into words what he does not know. If it raises Mr. Clarke in the estimation of bee-keepers generally, he is welcome to it. He needs it. I regret that I have taken up as much of your space, but I felt that American bee-keepers would like to have a peep "behind the scenes."

Beeton, Ont., Nov. 17, 1890.

F. H. Macpherson.

[These personal matters are very distasteful to us and our readers—both sides having each had "one shot," let it suffice. —Ed.]

Good Honey Crop.

The honey season with us has been very good. Our apiary has averaged about 100 pounds to the colony. We had a splendid fall flow of nectar from golden rods and asters, which grow in profusion here in Shelby county. Mrs. Belle Demaree.

Zilpah, Ky., Nov. 24, 1890.

Bee-Keeping a Pleasure.

With 9 colonies in good condition, I started last spring. We had good weather, but the bees did not gather much honey; and very little from white and Alsike clovers. (Of the latter I had two acres.) By Aug. 1, I got 80 pounds of comb-honey, and very little extracted-honey, and one heavy swarm. Bee-keeping is a pleasure for me, even if I do not make much by it. I keep my bees in a bee-house or shed, both in summer and winter. The space between the hives and on top, I fill with chaff. I have learned a good deal from the Bee Journal in a year, and all it has cost me is one dollar. Charles Duclos.

Saginaw, Mich., Nov. 26, 1890.

A Crop of 20,000 Pounds.

The little advertisemet I placed in the Bee Journal a short time ago, offering my season's crop of honey for sale, has sold it all, and my crop, for this year of about 20,000 pounds, is also gone. I hope that my customers will see this, and not put themselves and me to trouble and expense by ordering any more from me this year. Perhaps I can do my brother bee keepers some good by telling them how I came to sell my crop so quickly. First, I have learned how, and do, take the pains to produce and care for, after taking out, my extracted-honey in such manner that it is ripe, and fully equal to any comb-honey in flavor and consistency. It costs a little more to produce it this way, but not so very much more either, when one knows just how to do it. Another point is that, notwithstanding the short crop and scarcity this season, I have KEPT THE PRICES DOWN. This has given me a broader sale; consequently, a better chance to introduce my goods. Here let me say to all supply dealers, no matter what line of goods, I believe that the cheapest method of advertising and building up a trade, is to furnish such goods as will give the best satisfaction clear to the end. James Heddon.

Dowagiac, Mich., Nov. 14, 1890.

Indiana State Fair.

In the list of premiums awarded at the Indiana State Fair, I made two mistakes on page 708. I noted Mr. Kirkpatrick as 1st on apiarian supplies, but he should have had the 2d, and Mr. Zimmerman the 1st.

I mentioned Mr. Kirkpatrick having the 1st on wholesale packages and crates, and Mr. Zimmerman the 2d; but Mr. Zimmerman should have had both 1st and 2d premiums instead of one 2d.

As I sent the report and made the mistakes, I desire you to correct them.

Julius Moesch.

No Swarms.

Last Fall I had 38 colonies of bees; all wintered well, but the Spring was so cold and wet that they did not breed up very much; in fact, all the forepart of June it was so wet that the bees could not work half of the time. I got no swarms, and only 100 pounds of comb-honey, this season. My bees are in good condition for winter, but those of my neighbors are in a starving condition. They all use box-hives. I have the only frame hive in this town, and I use Langstroth hives. J. C. Serven.

Wolcott, N. Y., Nov. 25, 1890.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

HONEY AND BEESWAX MARKET.

CHICAGO, Nov. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Nov. 28.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Nov. 27.—Comb honey in good demand at 15@17c per lb. Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

NEW YORK, Oct. 24.—We quote: Fancy 1-lbs., white, 16@18c.; 2-lbs., white, 14@15c. Off grades, 1-lbs., 14@15c.; 2-lbs., 12@13c. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 10@11c.—Extracted, white clover and basswood, 8@8½c buckwheat, 7c.; California, 6½@7 cents per lb Southern, 70c per gallon.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 28.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 12.—There is a good demand for all kinds of honey. Arrivals are fair of all but comb honey and Southern extracted. Small lots only of each are arriving, and are sold immediately. California honey seems to be as highly appreciated in our market as the best clover honey. We quote choice comb honey nominal at 16@18c per lb. Extracted honey at 5½@8c per lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Nov. 25.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.: 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.

S. T. FISH & CO., 189 S. Water St.

BOSTON, Nov. 28.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 7@9c. No beeswax on hand.

BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.; good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.: dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.

A. V. BISHOP, 142 W. Water st.

ALBANY, N. Y., Nov. 22.—We are selling white honey at 17@19c; mixed, 15@16c; buckwheat, 12@14c. The difference in these prices is for different size combs, glassed and unglassed. Extracted, light, 8½@10c; amber, 7@8c; dark, 6@7c. Beeswax, 28@30c.

H. R. WRIGHT, 326-328 Broadway.

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the Bee Journal. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

☞ "The Bee-Keepers' Advertiser" is the name given to a 4-page circular just issued by Henry Alley, of Wenham, Mass. It is a kind of premium list for the "Api," we think. The Bay State hive, with closed-end-frames, receives some attention. It is to be published quarterly at 25 cents a year, and this is No. 1 of Vol. I.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

Advertisements.

THE Queen I got of you last May has the FINEST bees in this section—gentle and admired by all who look at them.—J. D. BLOOD, Brookfield, Mo., Oct. 13, 1890.

Orders booked now for 1891—pay on arrival of QUEENS. Enclose stamp for prices.

JACOB T. TIMPE, Grand Ledge, Mich.
49A1t
Mention the American Bee Journal.

Rural Life!

100 Pages—Price, 25 Cents.

RARELY is such a collection of valuable ideas embodied in a pamphlet like this. Its scope is as broad as its title, and the matter is presented in a concise, "boiled-down" manner, giving experience of many in few words. Among the subjects treated are these: Economy; Prosperity and Adversity; Character; Health; Remedies; Mistakes of Life; Is Life worth Living; Domestic and Household Affairs; Planting and Culture of Vegetables; Planting, culture, trimming and training Vines, Trees and Plants; Bees, Poultry, Live-Stock, Farm Topics, Pithy Paragraphs, etc. It is neatly bound in paper covers, and has a comprehensive index.

FREE AS A PREMIUM We will present this Book to any person sending us one new subscriber for the BEE JOURNAL, or the HOME JOURNAL, with the subscription price for a year.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

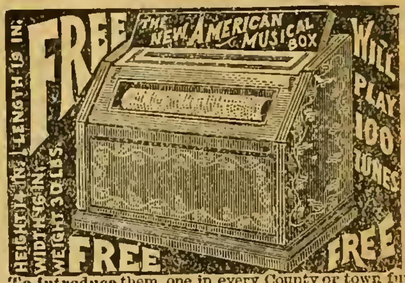
Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

The Honey Almanac

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics, Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30; 100 for $2.90. The foregoing are POSTPAID prices: following are prices when sent by express or freight: 100 for $2.50; 500 for $10.00; 1,000 for $15.00. The Bee-Keeper's CARD will be printed on the first page without extra cost, when 25 or more are ordered at one time.

We Have a Few Hundreds left, of the Honey Almanac for this year. They should be used at once, and therefore we offer them at **one-third** the above prices.

THOS. G. NEWMAN & SON,
246 East Madiaon St., - CHICAGO, ILL.



To introduce them, one in every County or town furnished reliable persons (either sex) who will promise to show it. **Excelsior Music Box Co.**, Box 2126, N. Y. City
49A1t
Mention the American Bee Journal.

GROUND CORK
For Packing Bees in Winter.

THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf
Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00**, postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

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31Ctf WASHINGTON, D. C.

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BEE SUPPLIES
CATALOGUE FREE.
PUBLISHER OF GLEANINGS IN BEE CULTURE
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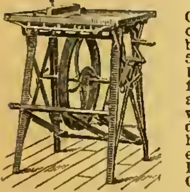
Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, **W. F. & JOHN BARNES,**
45Ctf No. 196 Ruby St., Rockford, Ill.

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Satisfaction Guaranteed
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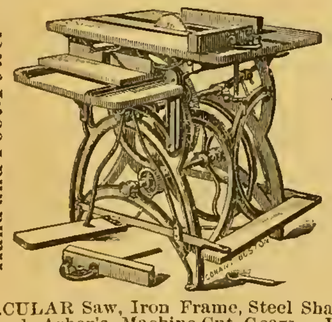
MACHINERY



CIRCULAR Saw, Iron Frame, Steel Shafts, and Arbor's Machine-Cut Gears. Iron Center-part in top. Send for Circular and Price-List. **J. M. MARSTON & CO.,**
21C13t 75 Lenox Street, BOSTON, MASS.

THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

"Marketing," Will be the Special topic of the August number.

The "Review" is Published monthly, at 50 cts. a year. Send for samples (free) and see if you can afford to be without it.

Address Bee-Keepers' Review,
W Z HUTCHINSON, Ed. & Prop Flint, Mich.

Do You Know That?

WHAT I SAW!

DR. W. W. SATTERLEE'S wonderful Reply to Socialism—regular price, 40 cts.—THE NEW PEERLESS ATLAS, which will be complete in November, and will contain the

Census Reports of 1890

And **THE LEVER** for one year, the great Prohibition Newspaper, will all be sent to any New Subscriber for only $1.50. Sample copy of paper free. Address,

CENTER LEVER COMPANY,
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Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ills

HONEY

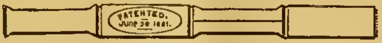
WE are now ready to receive shipments of **HONEY,** and would be pleased to open correspondence. Liberal advances made on consignments. Prompt returns. Quick shipments of **Comb and Extracted** will meet an active market. Reference on file with the American Bee Journal.

S. T. FISH & CO., 189 So. Water St.,
33A20t CHICAGO, ILLS.

J. FORNCROOK & CO.,

MANUFACTURERS OF THE

"BOSS" ONE-PIECE SECTIONS,


PATENTED, JUNE 28 1881.

WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best.

☞ Write for prices.

Watertown, Wis., Dec. 1, 1890. 1Cly

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.
Mention the American Bee Journal.

NEW FACTORY.

BEE-HIVES, SECTIONS, FRAMES, ETC. We have moved into our new factory, which is the largest and most complete in the world. We make the best of goods, and sell them at lowest prices. Write for free Illustrated Catalogue.

G. B. LEWIS CO., Watertown, Wis.
35Atf

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SOUTHERN HONEY.

WE PAY 5½c per lb. for a good quality of Southern Honey. Cash on arrival of honey. CHAS. F. MUTH & SON,
Freeman & Central Aves., - Cincinnati, Ohio
46A4t

BEE-KEEPERS' GUIDE;

EVERY Farmer and Bee-Keeper should have it. The

15th 1,000, Wholly Revised!

MUCH ENLARGED!

Contains many more beautiful Illustrations and is *up to date*. It is both PRACTICAL and SCIENTIFIC.

Prices: By mail, $1.50. To dealers, $1.00. In 100 lots, by freight, 50 per cent. off.

Address, **A. J. COOK,**
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MUTH'S

HONEY EXTRACTOR
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.

DO YOU WANT

To succeed in Apiculture? Then try the **Nonpareil Bee-Hive and Winter Case.**

Send for Catalogue of prices, and enclose 25 cents in stamps for the new book, "BEE-KEEPING FOR PROFIT," and you will not regret it.

Address, **DR. G. L. TINKER,**
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Mention the American Bee Journal.

BEESWAX WANTED.

Beeswax.—We will pay **27 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
Mention the American Bee Journal.

Turkeys for Market AND Turkeys for Profit.

BY "FANNY FIELD."

WRITTEN for those who are interested in Turkeys and wish to make them profitable. She reared in one year 150 Turkeys—and did the work for a family of five—netting her $300. No farming pays so well as Turkeys.

CONTENTS.—Age of breeding stock, about the Gobbler—Which breeds are best and most profitable—Setting the eggs—Care while hatching—Profit per head—Care until fully feathered—Food for the young—Save the feathers, they bring good prices—Number of hens to a Gobbler—Naragausct Turkeys—White Turkeys—Bronze Turkeys—Common Turkeys—To restore chilled Turkeys—Diseases of Turkeys—Leg weakness—Killing and dressing—Mark your Turkeys—Marketing—Capital and number to begin with—Tells all about the Turkey business. Price, **25 cents.**

Given for One New Subscriber to this paper for one year, with $1.00.

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
UNITED STATES
NEW YORK
LONDON
EUROPE
SOUTH AMERICA
AFRICA
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Dec. 13, 1890. No. 50.

EDITORIAL BUZZINGS.

Now doth the little busy bee
  Refrain from every toil,
And through the Winter season she
  All days and months beguile.

She dines on dainties rare and sweet,
  And wastes her time away ;
From now till Spring she'll simply eat
  And rest from day to day.

* * *

Next Year we shall have a Department entitled "Current Bee-Notes," in which we shall briefly give the contents of the apicultural publications of the World. This will be a valuable addition to "the only Weekly Bee-Paper in America." By reading it you will obtain the news, experiments, inventions, and important bee-literature of the World, in brief form.

* * *

The Many Friends of Mr. Dwight Furness, late of Indiana, will be pleased to learn that he was married to Miss Anna M. Rodgers, on Thursday, Nov. 27, 1890, at Guanajuato, Mexico. The happy pair will be at home after Dec. 15, at Guanajuato, Mexico, where, we presume, they will make their future home. The BEE JOURNAL wishes them much happiness and prosperity.

* * *

The ILLUSTRATED HOME JOURNAL is received and examined. It is well printed on good paper, is clean and handsome in appearance, with contents to match, and deserves wide circulation.—ALLEN PRINGLE, Selby, Ont.

* * *

☞ "Frank Leslies' Illustrated Newspaper" for the week ending Dec. 13, has fine illustrations of the Sioux Indian dance and incidents of the Indian excitement, with a striking full-page picture of the "Frank Leslie's Alaska expedition descending the perilous Alseck River."

Suggestions about the financial and permanent character of the "North American Bee-Keepers' Association" are made by the Secretary in *Gleanings*, as follows :

> FRIEND ROOT :—As you said at the Keokuk meeting, that you would undertake to get 20 or 30 life-members to the Association, and as we must try to manage to save a certain capital for the Association, I suggest that we make it a point to have the funds thus gathered invested in some safe interest-bearing investment, *the interest only* to be used by the Association. In this way we can perpetuate the good work and create an interest. I would even go further ; for, as the yearly subscribers are usually sufficiently numerous to pay annual expenses, it seems to me we ought to set aside also the affiliation fees of the State, Territorial and local Associations. In a few years we should have a capital large enough to enable us to offer prizes and premiums for competition, and we should raise an interest much greater than formerly in our meetings. Would you be so kind as to take the matter in hand, and discuss it in *Gleanings?* We must do something to get out of the old rut.
>
> C. P. DADANT.

To this excellent suggestion the editor appends the following :

> All right, Secretary Dadant. We will back you in all your suggestions as far as we can. Now, then, who among the readers of *Gleanings* is willing to pay up and stand by us in the effort to make the North American Bee Keepers' Association a permanent institution? It will cost you $10, it is true ; but after that you can attend the Convention for 40 years, if you live so long, and not pay anything. I have in mind quite a few of our readers who, I think, might, could, and should stand up. Let us hear from you. So far as I know, the editor of the AMERICAN BEE JOURNAL, and Ernest and myself, are at present the only life-members. Who will stand with us?

Brother Root makes one important omission—quite unintentionally, we are fully aware—that must be promptly corrected. It is now ten years ago that we became a life-member of the Association by vote and the payment of $10 (you will see that we already have our money back in annual fees for ten years). We were the *first* life-member, but *not the only one*, Brother D. A. Jones followed immediately, and Dr. Ehrick Parmley, the Secretary, then and there issued to each of us "Life-Membership Certificates." So now, with A. I. and Ernest Root there are four. Who will be the next? "Who will stand with us?" and help to make the Association successful and permanent.

* * *

The New Factory of G. B. Lewis Company, of Watertown, Wis., to replace the one burned up last Spring, is now complete. It is a frame building, three stories and basement high, 60 feet wide, 130 feet in length, and contains 26,000 square feet of floor room. Over 250,000 feet of lumber was used in its construction. It is run by both steam and water-power, and all the machinery has the latest improvements. We congratulate the firm upon its new establishment, the capacity of which is more than double that of the old one.

Much Ignorance exists concerning Foul-Brood. We have received several inquiries concerning it, and many samples have been sent to us for inspection and decision as to whether they contained the disease or not. Some contained chilled brood ; others had dead brood ; and one had no brood at all, as is noted on page 820 of this issue of the BEE JOURNAL.

As this question concerns very many bee-keepers, we have devoted four pages of this paper to a descriptive article of the disease from the pen of Mr. D. A. Jones. It is the one officially printed by the Canadian Government, in connection with the Law, passed by its Parliament, for the suppression of that dire disease. This, added to the Law itself, and an article from Mr. Wm. McEvoy, the official Inspector, which we published in last week's JOURNAL, will, no doubt, satisfy our friend Pringle, President of the Ontario Bee-Keepers' Association, that we are willing—and even anxious—that every bee-keeper may be well posted concerning the disease ; and if found to be in possession of sufficient information to cure it—when such cure is possible—or else to utterly wipe out its existence by fire, when necessary.

No samples of the disease should ever be sent in the mails, or even by express, for it is fraught with danger of spreading the disease. it is also quite unnecessary ; for any one who has common intelligence can readily detect it, after perusing the articles which we have presented in the BEE JOURNAL during the past month, on the subject.

* * *

Two Numbers More will end the present Volume of the BEE JOURNAL. Next year we shall change the form somewhat—giving two columns to the page, but it will have double the number of pages that it now contains—making **1664 pages** for the year. It will also be printed with new type, and an entire new dress. This will add considerable expense and labor, but it will be "a daisy." Although the Volume for the year 1891 will be as thick as Webster's Unabridged Dictionary—it will be supplied for a **single dollar!** This will be the most wonderful journalistic accomplishment in the apicultural World, eclipsing all others ! The AMERICAN BEE JOURNAL is the only weekly bee-periodical in America, and the largest one in the World !

Brother Root has our thanks for the following very kind allusion in *Gleanings* for Dec. 1, 1890 :

> On the first of next year the old AMERICAN BEE JOURNAL is to change its size to about that of these pages, and each number will contain 32 pages. For a weekly bee-journal this is a big undertaking ; but Newman & Son are equal to the task.

* * *

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction.

GLEAMS OF NEWS.

Odd Notions About Bees.—Here are some of them, as enumerated by an exchange :

It is an old English notion that a quarrelsome family get no honey, keep as many bees as they may. Bees also will not thrive if they are stolen. On the contrary, they will pine and die on account of the crime. In various sections, it is regarded as an exceedingly unlucky transaction to sell them for money, but they may be bartered without objection. They can be traded at will, but to be "guilty of selling them is a grievous omen, indeed, than which nothing can be more dreadful." A bushel of corn was formerly considered a fair equivalent for a swarm, or a small pig might be taken in exchange. The idea of bartering bees is not an alien one in New England.

There are scores of superstitions and notions concerning the sympathy of bees in human troubles, especially in connection with death. The entrance of a bee into a cottage is in large numbers of districts looked upon as an infallible sign of death. Swarming on dead wood is equally ominous. Informing bees of a death in the family is a custom still practiced in various sections of England by the common people. The formalities in making the announcement are executed with the greatest precision, for fear of giving offense to the bees.

A messenger has been known to have been despatched from a funeral cortege, while on the way to the grave, to inform the bees of the household sorrow, which had been forgotten at first, and in the way of atonement for the neglect, wine and honey were placed in front of the hives. In some localities even this limit is exceeded. On the occasion of death in the family, the apiaries are decorated with crape, and the inmates invited to the funeral.

A Laughable Bee-Yarn was illustrated last week in that "comic" periodical called "the Judge." We enjoyed a hearty laugh over it, and thinking that our readers might do the same, we give a description of its comical pictures, so that any who have "the blues" may also laugh and enjoy the fun with us ! Here it is :

A milk-wagon stops at the cottage gate, and the driver hastens to the door, where he finds an ordinary pitcher to receive the usual daily supply of milk for the family. He measures out a quart of the "lacteal fluid," pours it into the pitcher, and speedily departs.

One of the "little busy bees" was out early on that Summer morning, and espying the pitcher, concluded to inspect its contents. Before doing so, the bee circled around it, perchance to admire its floral exterior.

"Tabby," from the fence-top, saw the milk deposited there, and contemplating a raid upon the defenseless pitcher, said to herself : "Now, there's a treat for me !" Cautiously she advanced towards it, and then discovered the bee flying around the coveted treasure. Looking about on all sides for a moment, to be sure that, as a thief, she was not observed by any one, she lost sight of the bee, and wondering at its sudden disappearance, said : "Where did that bee go ?"

Feeling sure now that she was unobserved, she thrust her head into the pitcher, which, however, was none too large to accommodate it, and lapped up the tempting fluid to her heart's content, exclaiming : "Oh ! but that's good !"

The bee, on its inspecting tour inside the pitcher, was taken by surprise, and finding itself in close quarters, asserted its rights with *pointed* arguments for more room.

Tabby, feeling something sharp, exclaimed : "Oh ! but there's pins in it !" Her head began to feel funny, but she concluded to take another drink before abandoning the feast—but she found "more pins in it !" Attempting to leave, she found that the pitcher had become too small to allow her to do so, and the pain increasing, she cries out : "Great rats ! I can't get my head out !"

Then she rolled over and over in agony, and spilled all the milk that was left, but her head was still confined in that terrible pitcher ! She found more "pins," and experienced more pain !

She started to run, but not being able to see where she was going, she ran with full force against the stone wall of the cellar, and, with a "bang," the pitcher was smashed into scores of pieces, liberating her swollen and aching head (as well as the now poor frightened bee) from that temporary prison !

Now, Tabby sat down amid the fragments to contemplate the disaster. Looking up she discovered the bee just taking wing, and ejaculated : "There's that blamed bee !" And if she could have caught it, there would have been one less bee in the world !

We Congratulate Brother Root upon the fact that *Gleanings* has reached, and even passed, the ten thousand circulation, which it set out to do some months ago. *Gleanings* richly deserves this mark of public favor, for it is beautifully printed and carefully edited. If the reader desires to take another bee-periodical besides the AMERICAN BEE JOURNAL, we shall be pleased to send it and *Gleanings* for $1.75 a year, or both these and the ILLUSTRATED HOME JOURNAL for $2.35. This is a rare opportunity to secure three good periodicals for about the regular price of two.

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at **one-third** price. See page 831 of this paper.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Some Questions.

What is a Nucleus?

Will you please inform me what a nucleus is ? B. E. B.

Prairie du Chien, Wis., Dec. 5, 1890.

[Certainly. A nucleus is a miniature colony of bees, which may be increased to a full colony by careful management. The plural is "nuclei." These small colonies usually consist of one or two frames of comb with a queen (or a queen-cell, if to be used for queen-rearing), and a few hundreds of bees.—ED.]

Wintering Bees.

1. When is the proper time to put bees into the cellar ? 2. Should they be left out as long as the weather will permit them to fly every few days ? 3. Would it be right to take bees from a cellar in the middle of the Winter, if the weather would permit them to fly ? 4. Is it best to remove the bottom-boards when in the cellar ?

Bangor, Iowa. NOVICE.

[1. In this latitude they should be prepared to be put into the cellar in the latter part of November—then, when it turns cold and shows signs of Winter setting in, put them into the cellar.

2. Yes.

3. Yes ; many do so.

4. Yes, if they have loose bottom-boards.—ED.]

Queenlessness.

I send you a piece of comb. Will you please tell me if it contains foul-brood. I took it from a colony that I killed on Nov. 2. This colony was wormy, with about a pint of bees in it, mostly drones, and not a queen among them. Will you please tell me what was wrong with the colony, and will any danger arise if the honey from this colony is fed to the healthy bees ? I have 15 colonies that are in pretty good condition for the Winter. There was but a small surplus of honey this year.

Galena, Ills. CHAS. KNAUTZ.

[It was simply a case of queenlessness. The moths had been at work some, but not enough to cause trouble. There was no brood in the sample sent, and "foul-brood" was therefore impossible. In fact, it contained only a few cells of honey, and some bee-bread. There is nothing "wrong" with the honey, except its color.—ED.]

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

☞ The Carolina Bee-Keepers' Association, will hold the last session of 1890 in the Town Hall, Pineville, N. C., Dec. 18, 19. A good programme. All who feel an interest in modern bee-culture are cordially invited. Bring or send a full report of the season. Entertainment free.
(Other papers please copy.)
N. P. LYLES, Sec., Derita, N. C.

☞ The Annual Meeting of the Northern Illinois Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House, at Rockford, Ills., on Dec. 16, 17, 1890. The President has a good Programme in course of preparation.
D. A. FULLER, Sec.

The Apiarian Agnostic.

Written for the American Bee Journal

BY REV. W. F. CLARKE.

I do not know why I should be
Thrust forth to let the public see
How great is my stupidity
About "the little busy bee."

What I don't know about this theme
Would fill of paper many a ream,
But I will state a few details
Concerning which my knowledge fails.

I do not know the proper space
Apart the frames of comb to place;
Nor whether for the winter nest
Cellars or out-door hives are best.

do not know if seasons bad
Will from henceforward make us sad,
Or whether a large honey-flow
Again into our hives will go.

I do not know why prices fail
When little honey is for sale,
Nor how to make the market stay
So firm that bee-keeping will pay.

I don't know how to fix things so
Crowds will to bee-conventions go,
Lured by cheap fares and tempting rates,
Those usually resistless baits.

I don't know whether any more
Journals of apiarian lore
Are needed to diffuse the light
Which else were hidden out of sight.

I don't know whether bees can tell
When to dethrone their queens so well,
That we may safely put our trust
In their forethought as wise and just.

I don't know how I can prevent
A field of limited extent
From being overstocked with bees
While the rule holds: "Go as you please."

I do not know how to prevent
Brace-combs of troublesome extent,
Nor do I know of any plant
To raise where honey-flows are scant.

I don't know whether, as some claim,
A fixed excels a standing frame;
I know no hive of any form,
From which bees will not send a swarm.

I don't know if a time will be
When bee-keepers will come to see
Stamped on a single theory
Exactitude and certainty.

And yet I know so much, it took,
To hold it all, a good-sized book.
And on a single theme, I penned
A series, it was hard to end.

"How doth the little busy bee?"
I find a problem hard for me,
I know so little, yet so much,
I hardly dare the task to touch.

And so, I do not know but what
My tether's length I now have got,
I don't know but I'd better "stop,"
And close the Miller knowledge shop!

Guelph, Ont.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

QUERIES & REPLIES.

Should we allow Rats and Mice in a Bee-Cellar?

Written for the American Bee Journal

QUERY 742.—I have a cellar in which I wish to winter my bees, but it is badly infested with rats and mice. The temperature seldom goes to the freezing-point. How will it do to place wire-screens over the hive entrances, and over the tops of the frames, and then pile them up, break-joint fashion, with about one foot space between the hives, and leave the covers off?—G. B.

I should not dare to confine the bees to their hives.—R. L. TAYLOR.

It will do; but the rats will probably disturb the bees some.—DADANT & SON.

I have no experience in cellar wintering, and cannot advise.—M. MAHIN.

A piece of perforated zinc placed over the entrance will be a protection from mice. I do not think that it is advisable to take the covers off.—P. L. VIALLON.

Perhaps that will do. I have never tried it. But I should fear the confinement. I would try and kill the vermin. Poison them.—EUGENE SECOR.

It will do very well; but it would be better to make the cellar rat and mouse proof. Would this be very difficult?—A. J. COOK.

Your cellar will do very well, and with wire-screens you may be able to ward off the rats and mice, but I would advise an exterminating war against them with traps or suitable poison.—J. P. H. BROWN.

It will do to place screen of large mesh over the entrance. But I should prefer the rats and mice as numerous as bees in the hive rather than leave the frames open on top with nothing over them but wire-screen.—H. D. CUTTING.

Would not do it. The rats and mice will annoy the bees. The bees go to the screens to get out, and a general tumult will result. Dispose of the rats and mice, or keep the bees out of the cellar.—G. M. DOOLITTLE.

I would not do so. The numerous rats and mice will disturb the bees, even if they cannot get at them. Kill them off, or close them all out of your cellar with mortar.—JAMES HEDDON.

All right, except a strip of perforated zinc for the entrance would be preferable; that is, such zinc with perforations the size used as drone and queen excluders.—J. M. HAMBAUGH.

Do not put any screens over the entrances, but have them so narrow that the mice cannot get into the hives. Mice do not injure bees, except by crawling into the hives and building nests in the center of the brood-nest. Bar them out, and there will be no trouble from them.—J. E. POND.

I should think that the easiest way out of your dilemma would be to kill the rats and mice. Another thing you should do is to get some good cement and small rock and plaster up every hole and crevice. I have much more faith in exterminating the pests than in wire-screens.—C. H. DIBBERN.

If I understand you rightly, you would have air at the top and bottom. That is pretty airy. If I should have screens on top, I think that I would close the entrances tight. Perhaps it is better to leave the covers on, and screens at the entrances. Use coarse screens about 3 meshes to the inch, so that the bees can go through, but not mice.—C. C. MILLER.

Would not advise you to use wire-screens over the entrances, or over the top of the hive, unless covered by a cushion of some kind. The entrances had better be contracted to 3/8 of an inch opening by tacking on strips of tin on front of the hive to keep out mice. A 3/8-inch entrance, the full width of the hive, had better be left open.—G. L. TINKER.

Rid your cellar of vermin. A good Tabby with an interesting family, and a neighboring Tom, would be far cheaper kept than rats and mice. Catch them in traps; put potash in their runs to make their feet sore, and if you have kept food for them in barrels, fill them with water, and they will jump in as usual, and be drowned. No excuse for rats and mice; who would tolerate such a cellar?—MRS. L. HARRISON.

I am not sure that bees do as well entirely closed in the hives as when they can feel free to leave the hive; it is not so much a desire to leave the hive that worries them, as their natural dread of being imprisoned. They will sometimes do well fastened up as you propose, for I have tried it. But why not leave a small passageway through the wire cloth at the entrance.—G. W. DEMAREE.

Such a cellar would be very undesirable as a winter repository for bees. The vermin would annoy the bees, even if they did not get at the honey and combs. The rats and mice can be kept out by using plaster and broken glass. Those which are there in hiding can be caught in traps. Bees dislike to feel that they are prisoners, and for that reason the wire-screens would be unsatisfactory. The ventilation you propose, would be much like having a one-story house with the front door open, and the sky-light in the roof wide open too. It would be very uncomfortable to say the least. Either keep on the covers or close the entrances.—THE EDITOR.

Frame Covering for Winter.

What kind of covering, if any, should be used on top of the frames besides the cushion, in preparing bees for Winter? Is the duck used for feeders, etc., too close when put all over the frames tightly, with no corners turned up, to let the moisture from the bees to pass up through?

Fowler, O. H. D. BARBER.

[Perhaps the best thing to use for covering the frames, is burlap hemmed at the edges. Under this put some sticks across the frames, or use Hill's device to allow the bees to pass from one comb to another. Over this put a chaff-cushion made a little larger than the inside of the hive, so that it will tuck down snugly all around to prevent a draft, and absorb the moisture arising from the cluster.—ED.]

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the BEE JOURNAL. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

CORRESPONDENCE.

FOUL-BROOD.

Cause of Disease—Management and Cure.

BY D. A. JONES.

This disease has battled the skill of the bee-keepers for a great many years; it has destroyed thousand upon thousands of colonies, both in Europe and America; whole apiaries have been swept away, and the fond hopes of many bee-keepers have been blasted by its ravages. This disease is known to have existed in America for more than half a century. The late Mr. Quinby and many others knew of its existence to their sorrow.

Over fifty years ago many important facts in connection with the disease were learned and made known by Mr. Quinby, through his untiring efforts to cure the disease; in fact, he had about become its master, by the starvation plan, we believe, before any great efforts were taken on the part of others to stay its ravages. Burning and burying have been resorted to, and to those who have no better means at hand by which a cure can be effected, they had better take either of these, as the great danger of its spreading to other apiaries, or to bees in the woods, which might keep the disease lingering about in a locality for years, is too great to run any risk.

Much has been written and said on the matter. Our esteemed friend, Mr. C. F. Muth, of Cincinnati, the great honey-king of the Southwest, has written a little book on the disease, and its cure by the use of salicylic acid. Mr. Frank Cheshire, of London, England, believes he has made some important discoveries of late by the use of the microscope. Great credit is due Mr. Cheshire for the untiring efforts he has manifested in that direction, and should he accomplish what he anticipates, the bee-keepers of the world will owe him a debt of gratitude which they can never fully repay.

I feel confident that the efforts that are being put forth by so many at the present time will, sooner or later, find a cure that will be more easily performed than any yet known. I should like to see our great American authority, Prof. A. J. Cook, of Lansing, Mich., give the matter some attention; we all feel proud of his discoveries, being fully assured that he is less liable to err in his experiments than many others.

The disease seems to be pretty well scattered through Europe and America, and the loss sustained every year by its ravages will warrant our scientists in giving the matter all the attention that is possible. There have been various opinions expressed as to its origin, some believing that it was imported into this country, and that cases always originate from the imported disease; others believe that it can and does originate in this country; but this mater will doubtless be cleared up in time. Each party appears to be able to prove pretty conclusively that they are right—probably they both are. That it existed here many years before any importation of Italian bees was made, is beyond doubt. In some places there have been laws enacted to prevent its spread similar in character to the Act we now have, and commissioners or inspectors appointed to search out the disease, and see that it is either cured, or the bees and combs, etc., destroyed.

There has been a great deal of advice given about the cure and management of the disease, and many of those who have taken the trouble to give such advice, deserve much credit for the interest they have manifested in studying up the disease, and assisting their less fortunate brother bee-keepers. There are varied opinions regarding the spread of the disease; some think it is a disease of the honey, or rather that is the way in which the disease is usually spread; others believing that it is carried on the bodies and feet of the bees; some even go so far as to say that it may be carried on the body, feet, proboscis and other parts of the bees, and thus conveyed to the flowers of the fields, so that other bees visiting these flowers carry the disease home to their own hives.

That diseased colonies can carry the disease to the flowers seems scarcely probable to me. Once I knew of over 100 colonies of bees badly affected with foul-brood, with another apiary not a mile away, and although the bees from the diseased apiary gathered honey from the flowers in the same fields, no disease ever appeared in the other apiary. If bees carry the disease on their bodies, it seems very strange that, in all my experiments, I have never been able to detect any case that originated from the disease having been carried in that way.

Some recommend starving or fasting as a cure, and say "24 hours or 48 hours, or sometimes two or three days is sufficient." Those who attempt its cure in this manner are sure to meet with failure, as the time required for fasting does not depend so much on the number of hours or days as it does upon the fact that all the honey in their abdomens is consumed; if that could be accomplished in two hours by any means it would be sufficient, but, on the contrary, it may be six or eight days, and I have sometimes had them fasting even a longer time. I wonder if some genius cannot get out a patent right on some kind of a small press to make them discharge all their honey from their honey-sacs.

The fasting system has proved to be a most successful one with me, as also with many others. There is one beauty about it, viz.: it requires no medicine or drugs of any kind, and is within the reach of every person. Another advantage is, that if there is no brood in the hives, or if you do not wish to save the brood, the cure can be effected with but one hour or two hours' labor to each colony.

If the directions contained in this communication are followed carefully, no person need ever be troubled much with the disease, as the different appearances of dead brood, dying from various causes, are carefully and explicitly explained. I do not believe that the fasting system is the only one by which foul-brood can be cured, thinking that it may also be cured by other means, but thus far this appears to be the most simple and the surest way for the novice.

Chilled Brood.—Chilled brood is frequently caused by the bees moving off the brood, and not keeping it sufficiently warm. On cold nights, if the entrances of the hives are left open so that the atmosphere inside gets too cold, the bees contract their cluster, thus leaving a portion of the brood uncovered, which, not being protected, becomes chilled and dies. Sometimes bees swarm out in the spring, and leave the brood to die; this is very often caused by the bees having too much space, and not being able to keep up the necessary amount of heat to carry on breeding, become discouraged, and leave with the expectation of bettering their condition. I have known it to occur as the result of spring dwindling, and the bees being unable to cover their brood, swarm out. It may also arise from the bees having consumed all their stores, and seeing starvation staring them in the face, they leave with the object of improving their condition.

There are many other causes by which brood becomes chilled and dies. The appearance of this chilled brood, however, differs materially from that of foul-brood; the larva is frequently found dead in all stages, from the egg to the perfectly formed bee just ready to gnaw out, while foul-brood usually operates on the larva when it is *almost* fully grown, and should it have lived sufficiently long to have had the wings formed, and assumed the general appearance of the bee, say two or three days before emerging, then they appear to be old and strong enough to resist the disease, or, in other words, if they had been fed any of the diseased food, or food containing *fungi* or *spores* of foul-brood, they would have died and assumed the foul-broody appearance before they had become so fully developed.

Now, in this chilled brood will be found fully developed bees almost ready to leave their cells, and the skin of the larvæ seems to retain more perfectly its shape and appearance, and when pricked with a sharp instrument, the larvæ will usually be found to contain a watery substance quite unlike foul-brood. Another proof whereby chilled brood may be detected is, that bees almost fully developed are found dead in the cells, retaining their shape and appearance, never sink back into that brown, ropy matter which so plainly marks *pure foul-brood.*

Neglected Brood.—Neglected, deserted or starved brood resembles chilled brood very much in many respects, especially as it is found in all stages, from the egg to the perfect bee, but it differs from chilled brood in one respect very markedly; the bees after consuming all the honey in the cells, often remove all the food from the larvæ, giving it a very dry appearance, and sometimes they even bite or gnaw upon the larvæ, not being satisfied with taking their food from their cells, thus making holes in the bodies, and giving many of the larger larvæ a dry, shrivelled appearance. This may all occur before the bees desert the hive or die; and I have found all the brood dead except that just ready to leave the cells.

Over-heated Brood.—This is called by some scaled brood, by others suffocated or smothered brood, and is also known by various other names. It is usually caused by the hive being closed too tightly in hot weather, not allowing the bees sufficient ventilation; or in shipping, by not giving the bees sufficient ventilation, the bees become excited, and in trying to secure all the fresh air possible crowd each other to such an extent about the entrance or air passages that it becomes choked. I have known colonies to smother in a very short time. After the bees were smothered, the great heat which they produced seemed to have over-heated some of the brood, and in spite of every effort to save it by placing it in other colonies, some of it would die.

This dead brood, on examination, will be found to resemble chilled brood somewhat, and if allowed to remain in the cells, it becomes putrid, and smells very much like pure foul-brood. It differs from chilled brood in this respect; that while in chilled brood bees just ready to emerge are found dead in the cells, while the heating or smothering does not seem to affect the older larvæ to the same extent. I have found bees emerging one or two days after that seemed to have survived. When bees are smothered as above, from their over-heated condition, the moisture arising from their efforts, becoming condensed on the combs, make them very damp. This moisture seems to extend to the larvæ and brood, accounting in a measure for the rapid decomposition of the larvæ, and the greater disagreeableness of smell, being nearly as offensive an odor as that arising from foul-brood.

Drowned Brood.—This usually occurs where colonies are placed on low ground, and when a sudden rise in the water overflows the bank of the stream and the apiary is submerged. The water also rises up into the hives among the combs, and a large quantity of the brood is submerged and drowned. This drowned brood seems to differ some from the ordinary chilled brood, but resembles smothered or over-heated brood more, being damp and soft in appearance, caused by the ground, hives and combs being so moist. If this dead brood is not removed, it produces a much more loathsome smell than chilled brood, becoming more putrid, and taking much longer time to dry up in the cells. Should the weather be very warm, damp and muggy, the drowned brood sometimes turns into a mild type of foul-brood, or into what looks and acts so much like it that it must be at least a first cousin to it.

I will relate a circumstance which is one of the number that leads me to believe that foul-brood *may be* sometimes *produced* in the apiary, and not always imported, as some of our friends honestly imagine. A man once had 100 colonies in an isolated locality, with no other apiary within miles of it, and no bees in the woods, as far as known; there were no signs of foul-brood in his apiary all Summer, though the colonies were carefully examined once or twice each week.

In August or September a flood came and drowned a large portion of the brood in some of the hives, 10 or 15 of them were so much injured by the flood, that the bees did not remove the dead brood, and in most of the colonies nearly all the combs were full of brood. The weather, after the flood, was very warm and muggy, the atmosphere very oppressive for days, with frequent showers. All the colonies from which the dead brood was removed came out all right, while the 10 or 15, from which it was not removed, became very badly diseased; they attempted to rear brood, but some of it was affected, so much so that the odor arising from the brood dying was very unpleasant. When all the dead brood was removed, the disease continued, and it appeared that the spores of the disease were in the honey, as many of the larvæ were found dead. Each time brood was reared the disease continued to increase, in spite of salicylic acid and other treatments then in vogue. Honey from the combs, when given to a healthy colony, produced the disease.

It appeared in every respect like foul-brood, and I feel satisfied that it was. Now, if it did not emanate from the decaying brood, which was a mass of corruption, where *did* it come from? The stench and spores arising from it, seem to have diseased the honey, and when the honey was fed to the larvæ, it affected them. We believe that some diseases arise *de novo*, or spontaneously, while others arise from germs or spores which find in decaying matter a favorable opportunity for multiplication. In this case, everything was favorable for their development. If I recollect aright, cholera always starts in the valley of the Ganges, because it is a most favorable spot for its propagation.

Dead Brood—What Some Call a Mild Type of Foul-Brood.—This resembles foul-brood more closely than any of the others, because there appears to be no apparent cause for the death. Larvæ are found to die in almost all stages, from the half-grown larva up to the imago, or fully developed bee. Now, in appearance, this seems to resemble chilled brood, so far as its dryness is concerned; it also more closely retains its shape. The larva does not flatten out and recede to the back of the cell; the skin of the larva shows much less inclination to wrinkle, and it retains its size and shape more perfectly. If the larva is pierced with the point of a very sharp instrument, it will be found to contain a dark, inky-like, watery substance. The bees usually remove this sooner or later. Sometimes, however, they allow it to dry up considerably before doing so; the older larva that is almost ready to emerge, may be found by a slight sinking of the capping; but the capping does not sink as much as the capping of a foul-broody cell, and if, with the point of a sharp knife, you attempt to remove it, you will find it much stronger than that of a genuine foul-broody cell.

There are several suppositions as to the cause of this, one of which is, that the larva lives longer, and spins the cocoon more perfectly under the capping before it dies, while the one diseased with genuine foul-brood seldom, if ever, does to any extent; thus the capping of the foul-broody cells will be found to be more concave, and more easily removed. Some imagine that the foul odor from the matter therein affect the capping, and makes it softer and more easy of removal. I have never found this disease to increase as rapidly as the genuine foul-brood; in fact, I have known it to continue in a hive for two seasons, with only a proportion (not exceeding one-fourth) of the brood becoming affected. I can assign no reason for the fact—but *I have never known it to appear in any other than a hybrid colony.*

Until the disease becomes quite bad, it does not appear to affect their honey-gathering qualities, but it seems to have a discouraging effect on their breeding propensities, as they exhibit less energy in that direction when so affected. Now the manner in which this brood appears to die, and all the appearances and circumstances attending its death, lead a great many to imagine it to be genuine foul-brood. It does not spread as rapidly, nor is it as contagious as the genuine foul-brood, usually confining itself to the hives in which it originated. It always lacks one of the true tests of real foul-brood, viz.: the brown, coffee-colored, ropy matter found in foul-brood cells. But it is quite usual to find cells capped over containing the dead larvæ which are punctured with small holes similar to that of foul-brood.

Dead Larvæ or Brood Found in Colonies after Shipment.—In bees that have been shipped from one point to another we frequently find, a few days after, cells here and there among the brood containing dead larvæ or brood just ready to emerge. I have known this to occur in shipping in the Spring, Summer and Fall, but more frequently in the Spring; and have been asked by experienced bee-keepers why dead larvæ were found in cells at times, even for weeks after their arrival. Some attribute it to the excitement of the bees while in transit, neglecting to feed the larvæ at a very critical period in their development; others attribute it to jarring, and the general disorganizing of the staff of the hive, and to various other causes. This looks very much like foul-brood sometimes, but it may be known and distinguished from it by the larva retaining its shape and its appearance; also by finding old and matured larvæ.

I once sent a shipment of 50 colonies of bees to one of the best bee-keepers in Canada, one who had much experience, and one who was a good judge of foul-brood, when, in looking them over, he detected what he thought to be the first symptoms of foul-brood; in two colonies the appearance was more marked. These two he returned to me. I examined them closely day after day for weeks, as also did my men, and we satisfied ourselves that it was not foul-brood, as the colonies increased, we removed all the dead larvæ, and none of it ever returned or turned to that brown ropy matter which must be found where foul-brood exists. There are many parcels sent me every year to examine, supposed by the senders to be foul-brood, but while some prove to be the genuine article, many are not. Whether it is or not, is usually told by the circumstances attending it. In exchanging from one hive to another, combs are sometimes taken from the hives containing chilled, or perhaps some of this dead brood caused by shipping, and placed in other hives. Should this dead brood be left, or not removed by the bees, it is therefore sometimes mistaken for foul-brood.

Foul-Brood.—Foul-brood is a disease *in the honey*, or rather, that is where it appears to lurk. It seems that the spores escape from the cells containing the decaying larvæ, lodge in the honey, and by that means, to a very great extent, it continues its ravages, or, in other words, the contagion is spread. It is true that combs containing foul-brood cannot be used, at least I have never been able to use them; no amount of doctoring that I could do would disinfect them. It appears that the combs are diseased in several ways; the spores remaining in the honey, and drying up in the cells, also in the pollen and in the wax as well. Those cells that have contained foul-brood always appear to have spores left in them, and if the dead larvæ have not been removed, they dry up in the bottom of the cell, and are sometimes scarcely discernible without the aid of a microscope. I have failed to purify these, although I have made repeated efforts to do so. I have not, however, given up, as I hope to be able to disinfect combs without resorting to destruction, but as yet heat is the only thing I have found which will destroy the germs by which the disease is generated.

I have taken honey from diseased colonies, have frozen it in an ice-cream freezer for days, and subjected it to the lowest temperature that could be obtained in that way, then made a nucleus, and fed it on this frozen honey. The result was that a very large number of the larvæ first capped died of foul-brood, thus proving conclusively that subjecting the honey to a low temperature had no effect. Again, I made repeated efforts by freezing both honey and comb which had been taken from foul-broody colonies with like effect.

Once I had subjected honey-combs to a temperature of 35° below zero, allowing them to remain frozen all Winter. The following Spring, when one of these combs was placed for experimental purposes in the nucleus, it gave to it the disease; as also did the honey fed it.

After repeated experiments, I am fully convinced that no amount of frost will kill the spores, and I believe that they lie dormant during frost, and when thawed out, lose none of their destructive qualities. It is generally believed that severe frost will kill the disease, but let me warn bee-keepers never to attempt its cure by that method. Some of the honey which had been frozen along with the comb in the experiments I have mentioned, after having been boiled a few minutes, failed to transmit the disease. Thus, after many trials, I proved beyond a doubt, that heat *will* kill the germs by which the disease is generated, and that foul-broody honey, after having been boiled, can be fed with impunity to any colony.

There are some who, I believe, honestly imagine that the disease is conveyed by the bees carrying it on their bodies, feet, proboscis, or other parts; now, that appears to be not the usual way at least. It may be that after a colony is very badly infected, some spores *may be* conveyed in this manner, but I have never known a case which could satisfy me that that was the cause of its origin, after hundreds of experiments to test the matter most thoroughly, to describe which minutely would require a good-sized volume.

If the bees carry the disease about their bodies in any way, how is it that after innumerable experiments I have proved most conclusively that as soon as the honey is consumed in their abdomens the disease is gone? I have taken scores of the worst affected colonies I could find, and placing them in boxes with wire-cloth sides for ventilating purposes, have set them away in a cool place, where they would cluster, the same in appearance as a swarm on a lamb, and if the place was sufficiently cool and damp, say the cellar for instance, they would remain in that dormant state with scarcely a visible motion, until the honey was consumed in their bodies.

As soon as this was accomplished, I have taken them out and shaken them down (like a swarm) on combs or foundation, and have fed them honey or syrup, after which, in a very short time, they set to work. If all this is done properly, the disease never returns, and how is it possible, if this disease remains attached to the bodies of the bees composing this cluster, that the germs would escape?" Surely, they would carry *some* into their new homes and start the disease afresh. This never occurs. Then, again, if the bees are shaken out of a foul-broody colony into a clean hive, and allowed to remain there until the honey is consumed in their bodies, the disease will never return; in other words, placing the bees in a new home without honey in their abdomens, may be looked upon as a sure cure.

If one experiment, or even twenty, only had been tried to convince me on this point, I might yet doubt its efficiency, but when hundreds have proved that the disease will *not* return, it is conclusive evidence, to me at least.

I know of one gentleman who had a score or more colonies badly diseased with foul-brood early in the Spring, before there was any honey in the flowers. He shook all the bees out of each hive into clean hives filled with foundation; the weather was cold and unfavorable for drawing out the foundation, and it was a number of days before they made much progress in that direction, sufficient time at least to consume the honey in their abdomens; in fact, they had to be fed some considerable time before brood-rearing commenced. In not one instance did the disease re-appear.

Combs from a diseased colony frozen for three winters in succession, will produce the disease when placed in a healthy colony. Honey from a diseased colony may be kept for years, but when fed to a colony in a healthy state, it will transmit the disease. How is it that the disease will remain in the honey for years, and will not remain on the bees (if it has ever been there) for as many days? If the bees carry the disease in any other way excepting in the honey, how is it that, if you extract the honey from a foul-brood colony, and allow the bees to consume all the honey that remains in the cells, and that when they begin to show signs of hunger by removing them to a fasting box, a very much shorter period of fasting will suffice. If their abdomens are filled with honey before they are removed to the fasting box, they have to fast for a number of days before being put into a new hive.

Fasting.—The preparation of a colony of bees for fasting is very important, as it makes a marked difference whether they are queenless or not, also the length of time they have been queenless. A colony made queenless and placed in a box to fast would become agitated, and would not all fast alike; some would starve to death, while others that were less excitable, would not have the honey in their abdomens consumed, but if the colony had their queen with them, they would cluster and remain perfectly quiet.

If a colony has been made queenless, and allowed to remain so for a few days, they may be placed in a fasting box without the danger before mentioned, so that it is necessary for the bees either to have a queen, or to have remained queenless for several days. Then again, if they are put in a warm place, some of them appear to become excited, and anxious to get out and continue to rush about in an excited manner, until they have consumed the honey in their abdomens, and die from starvation, labor and worry, while those that remained quiet would yet retain almost all they had eaten; thus a cool place is necessary.

Darkness is another very important thing, because if the colony is placed in the sunshine, or where it is light, they become as much excited as in a warm place, and seem determined to get out, while if placed in a dark cellar or some other suitable place, they cluster as naturally as a swarm. If the temperature is not above 55°, they will remain in this cluster so quietly that it is with difficulty you can discern a movement. They will remain in this quiet state from 4 to 8 days, according to the amount of honey they take with them, and according to the temperature of the place. I have had instances where they have remained over 8 days, while testing the length of time they *would* live.

A similar colony placed in a warm repository, would consume their honey in 3 or 4 days, while the one placed in the sun, or light, would worry themselves, so that 2 days or less would sometimes be sufficient to exhaust many of their number. They should be fasted alike, or as nearly so as possible. Before removing them to the fasting box from their hive, they should be smoked and drummed, and made to fill themselves with honey as nearly alike in quantity as possible. After this has been done, no time should be lost in removing them, for if allowed to remain a few minutes in the hive, many of them will replace the honey in the cells, so that while a portion of them would be filled with honey, others would have none, and consequently, could not be expected to fast as long as those whose honey-sacs were filled.

Great care should be taken after they are placed in the fasting box with the sieve over it, that no bees from other hives are allowed to light on this sieve or screen, as I have known bees to pass honey through the screen, and should they give any of this honey to a bee from another colony (and it should be used in brood-rearing) that colony would also become diseased. I have never yet known the disease to be contracted by either queens or drones, although I have experimented largely in that direction, taking queens from foul-broody colonies and placing them in healthy colonies.

I was once informed by one of the best bee-keepers in the United States, that he had tried the experiment scores of times; that is, selling the queens out of healthy colonies, and replacing them with those from the worst affected foul-broody colonies, and in no instance did the disease appear in these hives, the apiary being 3 miles from the one in which the diseased colonies were. The gentleman had several bee-farms. I do not mean to assert that the disease *never has been* carried by queens or drones, but I honestly believe that if it *has ever been* the case, that the honey taken with them had *something* to do with it.

Modus Operandi.—Having sufficiently described the disease so that the merest novice should be able to detect it, also why the various operations should be performed, it will now be in order to describe the process that we usually adopt which makes success certain every time. You must first have the necessary tools to operate with: A smoker and fasting box (or a hive with a screen to fit over the top).

With smoker in hand, go to the hive which you wish to operate on. If there is no brood in the hive, or if you do not care to save the brood, you then smoke and drum the bees until they all fill themselves with honey; as soon as they are filled, they must be shaken out into the box you intend them to occupy in fasting. A better way is to lift the hive off the stand and set the fasting box in its place; then, when the bees are shaken down into this box, those that take wing will come in more readily.

Place the combs in an empty hive, then by turning the hive upside down and striking it on the ground, the bees will pass up into the fasting box; when all the bees are in, place a wire-screen over the top, close the entrance, and carry them to some dark repository (a cellar if possible) setting the hive down and turning it over on its side; by this means what was formerly the top of the box becomes the side, and the bees will cluster on the upper side of the box, thus allowing the air to pass through the screen.

They may remain in this dark repository hanging in a cluster similar to a swarm until they show signs of hunger, which is easily perceived. As the food in the abdomen is gradually consumed, the cluster becomes smaller; the bodies of the bees also look smaller; a few bees, say a hundred or so, will fall to the bottom-board, crawling about in a slow, quiet manner, indicating their starving condition (if they are well-filled with honey when placed in the fasting box, they are likely to require from 4 to 6 days' fasting).

They may be removed, but if removed before all the honey is consumed in their abdomens, great difficulty is likely to arise. They must be watched very carefully (say 3 times a day after the third day) because after the honey in their abdomens is all consumed, they are liable to die very quickly. Take them out, have your hive prepared where you wish them to remain; place in it some combs, then shake the bees down in front, and allow them to run in just the same as you would a swarm. If there is no food in the combs, they should be fed, as they will be too weak to gather honey, but after being fed they will go to work the same as a swarm, in a few days, if the flow is good.

The combs should now be melted into wax, and the hive and frames boiled for 10 minutes to disinfect them. If there is any honey in the combs, it may be extracted and boiled for 10 minutes, when it will do for food, but a little water should be put into the honey before boiling (about one pound of water to five pounds of honey).

Should there be some brood in the combs, and you would prefer to save it, you should leave enough bees in the colony to take care of the brood; the queen should always be taken with the bees the first time. Then as soon as the brood hatches out of the combs, the bees must be shaken out into the fasting box and treated the same as the first lot.

Should you have a number of colonies diseased with foul-brood, it is better to go over all the hives, and put all the combs containing brood into hives by themselves; all others may be melted up at once. This will reduce the number of colonies considerably, making some which may be fasted at once, and then along as the brood hatches out, bees may be shaken from one or more colonies into the fasting box, and put through the same process; as soon as the combs are free from brood, they may be removed for treatment as prescribed. By continuing this process, one or two hundred colonies could be purified and put to work in clean hives in a few weeks, and all by one person, the only loss occurring being the labor required and time spent in fasting, which would otherwise be employed in gathering honey. When it is done between honey-flows, there will be no loss from the latter, but the operator must be careful to see that the bees do not lack stores. It could also be done in the fall after the honey-flow is over; the bees must then be fed upon honey or sugar-syrup for wintering.—*Canadian Bulletin, No. 33.*

Beeton, Ont.

SUGAR SYRUP.

Is this as Good as Honey for Bees in Winter?

Written for the Mass. Ploughman

BY G. A. STOCKWELL.

A writer on bees declares that the only proper food for bees in Winter is honey, and he makes sport of the fact that some bee-keepers take out all honey, and feed back sugar and water for the bees to live on during the Winter. He is sure that this practice is a "perversion of nature." If nature had its own way all the time, it would leave us often in the lurch. Nature, to serve man, must be restricted—guided—whether it concerns horses, cows or bees.

It has been proved often enough, to the loss of the bee-keeper, that although honey may be the natural food of bees in Summer and Winter, yet it has caused the destruction of many colonies of bees. In some seasons, some of the honey collected during the Summer is unfit for Winter food.

Owing to unusual weather—conditions, growth of plant and secretion of honey—the honey contains ingredients that produce diarrhea, and the destruction of colony, comb and brood is the result. It must be remembered that bees do not void excreta in the hive; if bees remain in the hive from November until April, the excreta must be retained during this time. It is supposed that only a minute variation in the food is needed to disturb this condition of the bee's body.

Therefore, it is not always safe to put faith in the natural food of bees; it may be poison to them. There is no doubt that granulated sugar is the best Winter food for bees. If honey sells for 25 cents a pound, and granulated sugar may be bought for 6 or 7 cents a pound, there is profit in exchanging one for the other.

The sugar is further reduced in cost by adding water. The proportion is ⅓ weight of water, added to the sugar, boiling-hot. If any bee-keeper is not sure that his bees have enough honey for the Winter, let them be given granulated sugar at once. Bees have been fed in this way in Mid-winter, and have been thus carried through until Spring. Feed the syrup warm.

Providence, R. I.

AN EPISODE.

My First Experience in the Introduction of Queen-Bees.

Written for the American Bee Journal

BY M. D. FISHER.

In the year 1882, while a resident of the village of F——, my occupations were chiefly dentistry and apiculture—dentistry as a livelihood, and apiculture as an amusement and recreation, and, perhaps, in time, a means of profit.

My bees, Italians, Holy Lands and Cyprians, were the progeny of first-class queens. During this time I was a student of two text-books on apiculture, also a reader of the *Bee-Keepers' Magazine*, and, after a study of these works, I was, in my own estimation, a professional apiarist; an estimation which was not wholly without foundation, for it does not require a great length of time for me to intellectually digest the contents of a book.

Well, one day about the time of white clover bloom, I procured a few yards of mosquito netting, and a thick pair of sheepskin mittens, and went into my humble apiary (10 colonies) to show the native bee-men how to multiply ten by three.

After dividing, I concluded to let the queenless colonies rear their own queens from the brood which I had furnished them, with one exception. Among these was a colony of handsome Italians with which I wished to test the profits of modern bee-keeping. I sent to New York for a queen, and in due time she arrived, and was pronounced "a daisy," although if she had been a cockroach, I should have introduced her with the same feeling of security regarding the future prosperity of the colony, for up to that time I had not seen specimens of either of these insects. The caged queen was put into the hive between two frames, and allowed to remain 24 hours for the purpose of becoming acquainted.

On the following day I again repaired to my apiary with the intent of releasing "Her Majesty," but, as a precautionary measure against any possible danger, I took my bottle of perfume (a conspicuous article of my toilet) and perfumed some sweetened water, with which I sprayed both bees and queen most thoroughly, to give them the same scent, according to some high authority. This done, I drew out the tin slide to the cage, and let her in among the bees.

Did they receive her? I should think they did. She ran down into the hive out of sight. "Peep, peep!" What was that? "Rats, rats!" I exclaimed to myself. No, it could not be rats nor mice; it must be the queen that made the noise ; it must be a signal of distress, so I quickly separated the large Quinby frames, and found her enveloped in a ball of bees as large as my fist.

Now, talk about magnificent bravery, for I had abandoned mittens and netting, and thrust my hand down and scooped up the whole ball, and flung them on the alighting board, liberated the queen, and re-caged her. Then with my handkerchief I wiped the perspiration from my brow, for the horse that carried Phil Sheridan to Winchester, never perspired more than did I, after performing that difficult apicultural sleight-of-hand feat.

No, that was not the cause of her peeping. After giving the subject careful consideration, I came to this conclusion : The perfume being of an agreeable odor, the bees liked to smell of her, and she liked to smell of them.

The peeping noise was not the signal of distress, but was her way of signifying her entire satisfaction with her surroundings. Acting on this hypothesis, I again released her, and not hearing from her again, I concluded she was all right, as she proved to be.

But this operation was destined to terminate in an accident to myself. It was a time when tight pants were in vogue, and one of the disappointed thousand, that I flung on the alighting board, managed to crawl up my pantaloon's leg, and after reaching a convenient point of my anatomy, just as I was stooping to pick up a tool that I had been using, the little rascal put in a plea of self-defense with such emphasis that my attention was at once attracted to its mode of operations. In fact, no member of the animal kingdom ever made a loftier ascension, unless it was the cow that jumped over the moon. To have dismantled in that thickly settled neighborhood, would have been held as inexcusable, even after a deliberate consideration of the circumstances, and therefore, like a plucky fellow, I shook him down on to the ground, and bore the pain without a murmur, not even asking the sympathy or tender ministrations of my wife.

Allen's Hill, N. Y.

THE PLACE.

What is the Best Location for an Apiary?

Read at the S.W. Wisconsin Convention

BY C. V. MAIN.

As I have been assigned the subject of Location, I will give you my idea of what I would consider a good locality.

I would locate an apiary in the shade, but not so dense as to hinder the bees in their flight, yet just enough to prevent the direct rays of the sun from shining on the hives, which should also be protected from the north and west winds in the Spring. I would suggest that the ground be slightly sloping to the south or east, where the hives could have the sun in the early morning.

But before locating an apiary, we must look to the natural honey-producing plants, shrubs, or trees. If possible, locate near an ample clover-field, as it will greatly benefit your honey-crop ; and if you are fortunate enough to establish your apiary in close proximity to a buckwheat field, it will help out the Autumn honey-flow.

If I were looking for a place to locate, I would note the early pollen sources, as it is very important that the bees have plenty of pollen (and that early) to stimulate brood-rearing. No time in the year is so important as in the early Spring. It starts the bees to work, stops dwindling, keeps them busy, and prevents their robbing other hives.

The following trees are named as some of the most desirable from which to obtain pollen : Soft-maple, willow, elm, witch-hazel, alder and poplar, while there are a number of flowers that also furnish early pollen. If it can be done, I would settle near plenty of basswood, say within a mile.

Let me caution everyone to exercise care and judgment in selecting a location. Misfortunes and small crops may come to you, but with a little forethought, these may be somewhat averted.

Marietta, Wis.

STORING HONEY.

Where to Keep Honey in the Best Condition.

Written for the Pacific Rural Press

BY S. L. WATKINS.

Too much cannot be said of the importance of proper caring for honey after it is taken from the hives. I am afraid that a great many producers do not give their surplus honey the attention that it requires, by proper ripening, and the grading and selection of packages for both comb and extracted honey.

One of the greatest secrets in the honey business is to have it thoroughly ripened before placing it upon the market. It does not pay to use second-hand pails and cans for packing and shipping extracted honey. The man who has his honey put up in new cans, with a bright, attractive label, will make 5 sales—where the man who has used old cans will make one.

All extracted honey should be graded. In our part of the State we have 3 different grades—the white, amber and dark—ranging in price from 1 to 5 cents per pound. Comb honey should also be graded into 2 or 3 different grades. After grading and scraping the propolis from the sections, it should be put in section or shipping-crates, and kept in a warm honey-house.

Never, under any consideration, keep honey in a cellar, or even in a room where the temperature changes so much as to cause dampness to settle on the surface of anything. If you do, the aroma and exquisite taste of the honey is destroyed.

An old man once asked me why the honey obtained from bee-trees in the winter-time, was always superior to any honey he ever bought or had taken from hives. I told him the reason probably was, that the honey he bought in the stores, and that he had taken from the hives, was not as well-ripened as that taken from the bee-trees.

The most essential requisites for ripening honey are warmth and dryness ; and this is especially necessary from the time the honey is stored in the hive, until it is fully ripened.

In Southern California they ripen their extracted honey in large tanks, holding from one to several thousand gallons, and in most cases the honey is ripened in the open air. A screen of some kind is fastened on the top to keep out bees and insects, and if I am correctly informed, they leave the honey in those tanks from 2 weeks to 2 months.

To an apiarist of small means, who has only a few colonies, and wishes to ripen his extracted honey, I would advise the purchase of a few stone crocks or jars, for they answer the purpose well. In storing comb-honey in a honey-house, be sure to keep it several inches above the floor, because in rainy and cold weather the honey seems to draw moisture, and the honey becomes thin and watery, and sometimes acquires a sour taste.

When you have finished canning all the extracted honey, have it so placed that the sun may shine on it as much as possible.

Grizzly Flat, Calif.

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New Subscribers can have the BEE JOURNAL and the ILLUSTRATED HOME JOURNAL from now until the end of 1891 for $1.35. This is a rare opportunity for clubbing two valuable periodicals for a slight advance upon the price of one, and getting the rest of this year *free*.

CONVENTION DIRECTORY.

Time and place of meeting.

1890.
Dec. 16, 17.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Dec. 18, 19.—Carolina, at Pineville, N. C.
N. P. Lyles, Sec., Derita, N. C.

Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood. ..Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM
OUR LETTER BOX

Winter Covering.

How is it about the cover over the bees for wintering out doors? Are they to be on the hives, or taken off? Please answer through the BEE JOURNAL.

Barber, Wis. R. TOLEBROTEN.

[If you mean the hive-covers, leave them on, of course. There should also be a straw mat or cushion of chaff over the frames for absorbing the moisture arising from the cluster of bees, if you do not "pack" the hives with straw all around. Your question is too indefinite for an intelligent reply.—ED.]

Illinois State Fair.

As Mrs. L. Harrison was not very well posted, or probably made a mistake in giving all the honors to the Iowa exhibitors of bees and honey at the late State Fair, I would call her attention to the fact that I, a resident of Illinois, carried away some of the honors, among them a second premium on comb honey; and so that you may see that Illinois was not entirely without honey, I will say that I obtained 900 pounds of comb-honey and 100 pounds of extracted-honey. My bees are in splendid condition for Winter. AARON COPPIN.

Wenona, Ills.

[There, Sister Harrison, you were a little too previous. Illinois is redeemed, even if it is a second-rate (second premium) affair. —ED.]

Excessive Swarming.

Will some of the many readers of the AMERICAN BEE JOURNAL tell me what to do to prevent bees from swarming too excessively. Last Summer, as a result of too much swarming, I obtained no comb-honey from my bees. If there is any possible way to overcome this difficulty, I shall be glad to know it. The hive I use is the 8-frame Wisconsin.

Being but a beginner in the art of bee-keeping, and very anxious to learn, I will ask Mr. J. M. Hambaugh for his reason for shaking bees in front of the hive.

And now, Mr. Editor, in thanking your contributors for the many good and helpful things found in the BEE JOURNAL, may I ask them to be a little more explicit, and when writing give their explanations more in detail. S. M. CARLZEN.

Montclair, Colo., Dec. 1, 1890.

Not Discouraged.

The season of 1890 is over, and although I had but 5 swarms, and 600 pounds of surplus honey in one-pound sections from my 73 colonies of bees, I am not one bit discouraged, but anticipate far better results next season. My bees are still out-of-doors, having plenty of stores laid by for winter. EDW. MARGILETH.

Mt. Carroll, Ills., Nov. 28, 1890.

Missouri Statistics.

Being requested by the Secretary of the Missouri State Board of Agriculture to furnish him statistics of the bee-keeping interests of Missouri for publication, and in compliance with this request, I ask every bee-keeper of this State to assist in this matter by sending to me a report of how many colonies of bees they had in the Spring and Fall of 1890; how much comb-honey, extracted-honey, and beeswax they obtained. I would also suggest you giving all information possible concerning those keeping bees in your neighborhood. As there are to be some 40,000 copies of the Agricultural Report printed and distributed, we now have an excellent opportunity of bringing the bee-keeping interests before the people of the State of Missouri. By attending promptly to this matter, you will not only confer a favor, but will be materially benefited yourself by so doing.

J. W. ROUSE, *Secretary Missouri State Bee-Keepers' Association.*

Mexico, Mo., Dec. 1, 1890.

Good Honey Crop.

My bees (about 100 colonies) have done exceedingly well this season. The colonies which were "strong" in the Spring (the great thing for success in bee-keeping) were in fine condition for the basswood gathering. I live on the banks of what was once a lake, but which has been dry for some years. This Fall this spot being a-bloom with sun-flowers, and the weather fine, the bees have been even busier secreting nectar from these blossoms than when gathering from the basswood blossoms. The warm, bright days and heavy dews at night assisted greatly in the gathering of this nectar. I make a specialty of extracted-honey, and will be able to extract close on to 100 pounds from each colony, which retails at 10 to 15 cents per pound. My bees have many frames of honey, more than they cluster on, seemingly, without having been capped over, and, as far as I am able to judge, this has been placed in combs after the gathering was past. My honey is very thick this season. I notice on fine days that the bees still drink plenty of water. Do they thin the honey with this water? and will this account for the apparently fresh gathered honey in combs after the disappearance of the flowers and the many nights of frosty weather? In putting my bees aside for the Winter, I leave from 6 to 8 frames of the brood-chamber pretty full of honey, and fill the super with dry sawdust and leaves. I move the entrance blocks to within an inch or half an inch. My hives are the 10-frame Langstroth. P. L. FORGAN.

Sloan, Iowa, Nov. 27, 1890.

[Bees do use water for diluting honey, preparing food for the young bees, etc.—ED.]

HONEY AND BEESWAX MARKET.

CHICAGO, Nov. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Nov. 28.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Nov. 27.—Comb honey in good demand at 15@17c per lb. Extracted, 7@8c. Beeswax, 27@28c.
M. H. HUNT. Bell Branch, Mich.

NEW YORK, Dec. 6.—We quote: Fancy 1-lbs., white, 16@17c.; 2-lbs., white, 13@14c. Off grades, 1-lbs., 13@14c.: 2-lbs., 12 cents. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 11 cents. Extracted, white clover and basswood, 8½@9c buckwheat, 6½@7c.; California, 6¾@7¼c.; Southern, 65@70c per gallon. Market has been inactive for weeks. Beeswax, 25@26c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 28.—We quote 1-lb. white comb, 16@18c; 1-lb. dark comb, 12@14c; extracted, 5@7c. California 1-lb. white comb, 16@17c; 1-lb. extra C & C, 16c; 2-lb. extra C & C, 14c; 2-lb. white, 15c; extracted, 6½@7c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 12.—There is a good demand for all kinds of honey. Arrivals are fair of all but comb honey and Southern extracted. Small lots only of each are arriving, and are sold immediately. California honey seems to be as highly appreciated in our market as the best clover honey. We quote choice comb honey nominal at 16@18c per lb. Extracted honey at 5½@8c per lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Nov. 25.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, Nov. 28.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 7@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

MILWAUKEE, Oct. 11.—Market is in good condition for honey; demand is steady and good values maintained, while the supply is fair to meet the current demands. We quote: Choice white 1-lbs., 17@18c.: good white 1-lbs. 16@17c. Dark and old 1-lbs., 10@12c. Extracted, white in barrels, 8½@9c.; in kegs or tin, 9@9½c.; dark, in barrels or kegs, 6@7c.—Beeswax, 26@30c.
A. V. BISHOP, 142 W. Water st.

ALBANY, N. Y., Dec. 6, 1890.—The honey market is quiet, but stock is light and prices well sustained. We are selling white at 16@20c; mixed, 14@15c; buckwheat, 13@14c. Extracted, white, 8½@10c; amber, 7@8c; dark, 6@6½c. Beeswax, 28@30c.
H. R. WRIGHT, 326-328 Broadway.

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☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

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☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

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☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
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Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
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American Poultry Journal	2 25	1 50
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We send both the Home Journal and Bee Journal for 1891, for $1.35.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00.

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CONTENTS.—Age of breeding stock, about the Gobbler—Which breeds are best and most profitable—Setting the eggs—Care while hatching—Profit per head—Care until fully feathered—Food for the young—Save the feathers, they bring good prices—Number of hens to a Gobbler—Naraganset Turkeys—White Turkeys—Bronze Turkeys—Common Turkeys—To restore chilled Turkeys—Diseases of Turkeys—Leg weakness—Killing and dressing—Mark your Turkeys—Marketing—Capital and number to begin with—Tells all about the Turkey business. Price, **25 cents.**

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is a pioneer in Horticulture, established ten years ago. Its Editor is a practical fruit grower, editing from his own vineyards and orchards. "It contains more practical information on Fruit Culture than any other journal," says Matthew Crawford.

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CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Dec. 20, 1890. No. 51.

EDITORIAL BUZZINGS.

Ring, happy bells, for friend and foe.
Ring in the Merry Christmas day !
Its holly-wreaths, its mistletoe,
Its happy hearts, both bright and gay !

We Wish all our readers, friends and correspondents

A Merry Christmas !

The Holiday Season has again arrived, and brings its Christmas cheer ! With its parties and pleasures—its kind words and tokens of love—its presents and remembrances—its family reunions and holiday attire—it comes with its gladsome, joyous merriment and annual blessedness.

Let every heart to-day rebound with delight, and every lip respond with thankfulness for that grand proclamation which now we commemorate—

"PEACE ON EARTH—
GOOD WILL TO MEN."

One Number More will end the present Volume of the BEE JOURNAL. Next year we shall change the form somewhat—giving two columns to the page, but it will have **double** the number of pages that it now contains—making **1664 pages** for the year. It will also be printed with new type, and an entire new dress. This will add considerable expense and labor, but it will be "a daisy." Although the Volume for the year 1891 will be as thick as Webster's Unabridged Dictionary—it will be supplied for a **single dollar!** This will be the most wonderful journalistic accomplishment in the apicultural World, eclipsing all others ! The AMERICAN BEE JOURNAL is the only weekly bee-periodical in America, and is even now the largest in the World !

Are Bees a Nuisance ?—This is the record of another suit to compel the removal of bees from the city limits, and the farcical outcome of it. Mr. Tatman says :

> A neighbor became offended at me for naught, and tried to compel the removal of my bees from town. It was tried before the Mayor, but they failed to sustain the case. I still have my bees in town, and several others keep bees here also, even since the prosecution. My neighbor is now on good terms, and I do not expect any further trouble. My bees have done but little good during the last few years, but I enjoy working with them, and I cannot refrain from working with them.
> J. H. TATMAN.
> Connersville, Ind., Dec. 6, 1890.

Mr. Tatman being a member of the National Bee-Keepers' Union, the General Manager has paid a portion of the attorney's fee, and the legal defense prevented the prosecution from being able to sustain the plea.

Lectures on bees at Farmers' Institutes are advocated by Mrs. L. Harrison, in the *Prairie Farmer*. She says :

> If you have an influence with "the powers that be," have a lecture on bees, illustrated with charts, showing how bees act as marriage priests between flowers. It would be well to have a lecture of this kind, during the Winter, whenever an opportunity offers, whether it be at an Institute, Grange, or horticultural meeting.

This advice is good and timely. Such lectures will help to dispel the ignorance so prevalent about the important part played by bees in the production of fruit. "Let there be light" to enlighten the darkness, and drive away ignorance and superstition from the minds of the people.

Don't Fail to attend the Michigan State Convention at Detroit on January 1 and 2, 1891. You can enjoy the New Year's day there, and have a delightful time. We would go, but the great rush of business consequent upon the New Year, will make it quite impossible for us to leave the office ; but Prof. Cook, Dr. Mason, Hon. R. L. Taylor, H. D. Cutting, W. Z. Hutchinson, Geo. H. Hilton, and many other enthusiasts are expected to be there, and a general "good time" will certainly be the result. "Go up to the Feast," and you will certainly come home refreshed !

Migratory Bee-Keeping. — An apiary on wheels is one of the latest innovations in California. After the foot-hills have been pastured the bee-herder moves his bees to a higher elevation, where they gather the nectar stored in the blossoms of wild clover, chaparral and other plants ; and when these have been relieved of their saccharine matter, the bees are again moved to a higher elevation, where flowers peculiar to that region yield up their sweets to them.—*Exchange.*

The Bee-Hive published at Andover, Conn., has now ceased to exist. The subscription list has been bought by the W. T. Falconer Manufacturing Company, and on the 1st of January they will begin their new monthly called the *Bee-Keeper*. The December issue of the *Bee-Hive* contained this item and comment :

> We understand that 11 colonies of bees were recently sold in this State for $100. It is safe to say that the party buying them at that price will know the value of bees by the time he gets back the price paid.

Next Year we shall have a Department entitled "Current Bee-Notes," in which we shall briefly give the contents of the apicultural publications of the World. This will be a valuable addition to "the only Weekly Bee-Paper in America." By reading it you will obtain the news, experiments, inventions, and important bee-literature of the World, in brief form.

Life-Membership in the N. A. B. K. A.—In order to become life-members in this Association, spoken of elsewhere in these columns, all you have to do is to pay $10 to the Secretary ; and when your name is voted upon and accepted, you will be a life-member. and no more ANNUAL dues to pay. Any one thoroughly interested in the success of the Society (and that success means a geat deal to our industry in general) cannot do better than to become a life-member. If he be a straightforward man there will be no doubt that he will be accepted.—*Gleanings.*

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction

20,000.—That is the number of square feet of floor surface in the new factory of the W. T. Falconer Manufacturing Company. The omission of the last cipher in their advertisement on the cover of the Report of the Keokuk Convention, made it nonsensical. That part of it appears as it should read on page 845.

Several new Catalogues for 1891 of bee-keepers' supplies have come to hand. We will notice all of them in the first number for next year. In justice to our patrons we shall hereafter only notice those that come from our advertisers.

For $2.15 we will send you the BEE JOURNAL, *Gleanings in Bee-Culture*, and the ILLUSTRATED HOME JOURNAL—all for the year 1891. The price quoted on page 820 was erroneous to the amount of 20 cents. This is a rare opportunity to secure 3 good periodicals for about the price of two.

Christmas Bells.

O bells! sweet bells! across the years
  Half gay, half sad, your chiming;
Old joys ye tell; old sorrows swell
  Throughout your tender rhyming.

O merry bells! this Christmas day
  How loud and clear your ringing!
Such love and mirth o'er all the earth
  Your lusty voices flinging!
—C. A. D.

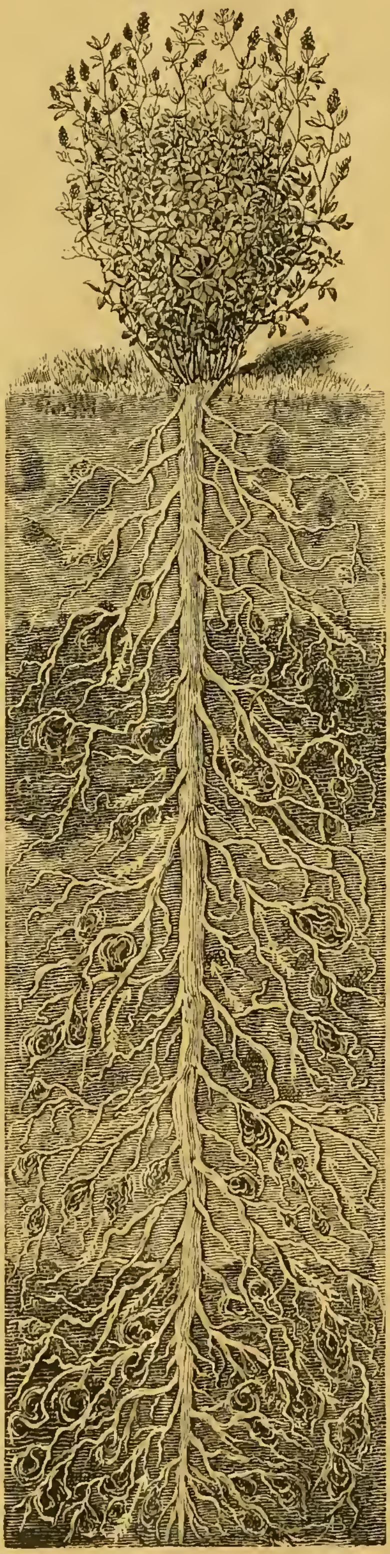
GLEAMS OF NEWS.

Alfalfa for Honey.—A correspondent sends us the following letter containing many questions which he wishes to have answered in the BEE JOURNAL for the information of not only himself, but many others. He says:

> A gentleman here wishes to sow 50 acres of land to grass within two miles of my bees, and I have been talking of alfalfa to him. Who can furnish the seed? At what price? Please give some directions as when and how to sow it, and what quantity per acre. Also state its relative merits for pasturage, or to the common red clover. What can white-clover seed be bought for per bushel? How many acres will one bushel sow? Myself and one of my neighbors wish to join the Bee-Keepers' Union; how will we proceed? W. G. SECOR.
> Greenfield, Ills.

Some seed stores keep it. If not convenient to get it near home, we can supply you, but its market quotations vary like white clover. It will very likely be advertised for sale in the BEE JOURNAL next Spring. The following from a correspondent in Utah will answer the questions propounded:

> Lucerne will grow on any land that will produce wheat, corn or potatoes, and will thrive on many lands that none of these will grow on, especially very light sand or gravel, though it does well on clay. But it does not grow on any land that the water stands within one foot of the surface, and there is no use in sowing it in an alkali strong enough to keep wheat from growing. Though particular about wet land, it will stand any amount of wet in the summer, as long as there is plenty of drainage. It will also stand all of the water in the Winter that may fall in the shape of rain, or snow that may melt.
>
> It is a very quick grower, and will mature the first crop in about two months from the time that growth commences. The second crop will mature in about six weeks from cutting, and the third in about five weeks from cutting of the second. The second crop is the heaviest, but the first is a little the best feed, as it grows a little longer than the others. It will yield about on an average of six tons per acre, and I have known it to produce double that quantity.
>
> SOWING.—The best method is to sow broadcast about 15 pounds per acre, where the land is in good condition, but on very weedy land, or clear gravel or sand that is very poor, put about 3 pounds more. You cannot get any crop from it the first year, but do not get discouraged if the plants are on an average of 10 inches apart, little, slim single stems about 4 or 6 inches high. Your prospect is good that you will get 4 tons per acre next year, and the next it will be as good as ever it will, and stand that way for ten years.
>
> It is best to sow with grain. Oats are the best; thus you will lose no time, but can have a crop from your land every year. In fact it does better to have it shaded when young. Sow at the same time that you do Spring grain.
>
> CULTIVATION.—Where there is plenty of rain, there is no cultivation needed, for it would be unwise to manure it, as it thrives fully as well on washed sand as it will on the best garden-spot, but in a few years it will make clear sand a rich land, owing to the decay of the root. The roots will sink themselves for a distance of 10 to 20 feet straight down. They are about 1½ inches in diameter, and fully one-half of that root cut, it will not be worth more than one-half for feed, and will be entirely worthless for market. Heavy dews are not good either.
>
> Rake into windrows, if cut with a mowing machine, and let it dry until it begins to let the leaves fall when handled roughly, then pick it up and lay it in piles, just one forkful in a pile, to cure. Do not roll it together, or it will not load easily, then you will have to pull it to pieces, thus losing one-half of the leaves.



Alfalfa, showing its long Roots.

In order to join the National Bee-Keepers' Union, send to the General Manager, in care of this office, the Entrance Fee ($1.00), and that pays for the Dues of any portion of the unexpired current year, ending Dec. 31. Any sent after this date pays for the year 1891.

Then it costs only one dollar for Annual Dues, which are payable every New Year's day, and must be paid within six months, in order to retain membership in the Union.

If membership ceases, all claims against former members also cease; and all claims to the protection of the Union are dissolved.

Northwestern Convention.—A correspondent sends us the following question:

> What has become of the Northwestern Bee-Keepers' Association? The Convention met in Chicago early in October, 1889. Please answer through the BEE JOURNAL. E. P. GIBBS.

By referring to page 659, it will be seen that the officers consulted upon the advisability of not holding a Convention this year, and concluded not to do so. The time for holding it came so near to that of the International, that it was doubtful, in a poor season for honey like the present, whether the two could be made a success in the same territory. The Northwestern, therefore, gave way to the International.

Handling Bees.—This is the title of a nice pamphlet, containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Convention Notices.

☞ The Annual Meeting of the Ontario Bee-Keepers' Association, will be held in the city of St. Catharines, on the 7th and 8th of January. All interested in bee-keeping are cordially invited to attend.
W. COUSE, Sec., Streetsville, Ont.

☞ The Annual Meeting of the Indiana State Bee-Keepers' Association, will be held in the Agricultural Rooms, State House, Indianapolis, Jan. 16, 17, 1891.
GEO. C. THOMPSON, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec.

QUERIES and REPLIES.

Prevention of Increase.

Written for the American Bee Journal

QUERY 743.—1. Where increase of swarms is not desired, is it a good plan to hive the swarm with a colony that has cast a swarm only a few days previous? 2. If this plan is objectionable in the forepart of the season, how would it work later? 3. If advisable to hive in this way, is it necessary to remove all queen-cells before hiving the swarm?—New York.

1. It may be in some cases. 2. It will be better then. 3. Yes.—DADANT & SON.

1. I never tried the plan, but good authorities have recommended it.—C. C. MILLER.

It is not a good plan. All the queen-cells should be removed before hiving.—J. P. H. BROWN.

1. Yes; very good. 2. Works well at all times. 3. Yes; very necessary.—A. J. COOK.

Over 15 years ago this theory came up, and many of us carefully tested it, but none of us use it now.—JAMES HEDDON.

No. My new system of management of swarms, described in my new book, is infinitely preferable.—G. L. TINKER.

1. Yes: it is one of the many plans of work, and it will work all right. 3. It is best to remove all queen-cells.—H. D. CUTTING.

This plan has never worked well with me. I prefer to return the swarm to its hive, and take the frames of brood out, and give them to other colonies needing to be strengthened. In either case always remove the queen-cells.—P. L. VIALLON.

1. This works very well. 2. Good. 3. Yes; and in doing this shake the bees from the combs 2 or 3 feet in front of the hive, and shake the swarm down with them, so as to avoid fighting.—G. M. DOOLITTLE.

I have done so. Sometimes it will work satisfactorily, and at other times they swarmed, but I never removed the queen-cells before hiving. I think it will work best in the latter part of the swarming season.—EUGENE SECOR.

1. I think not. 2. It is not advisable later; they are apt to kill each other. 3. You can return a second swarm to its parent colony by removing all queen-cells, and prevent further increase.—J. M. HAMBAUGH.

1. No rule can be given as to swarming. This plan will work as well as any, and will work as well at one time as another. 3. I do not remove the queen-cells, but let the bees fix up to suit themselves.—J. E. POND.

1. I should think so. I know some who practice it. Sometimes I have extracted the frames containing honey, and then run in a swarm. 2. Late in the season would do well. 3. The bees would take care of the queen-cells.—MRS. L. HARRISON.

I do not consider it a good plan at any time. The swarming fever would not always be allayed, and old queens would be retained when young ones might as well be had. Kill the old queen, return the swarm, and employ some easy way to prevent further swarming.—R. L. TAYLOR.

1. I tried this plan one year, and found it not a good one. The colony into which the swarm is put will be almost sure to swarm in a few days. 2. I do not think it will work any better later. 3. Of course remove the queen-cells, otherwise they would certainly swarm.—C. H. DIBBERN.

1. The plan would not work. I should expect the swarm to re-issue in 24 hours. 2. It would not be a good plan at any time. 3. A better plan would be to remove the old queen, destroy all the queen-cells, but one, and return the bees to the hive whence they came. It would be necessary to look for and destroy any queen-cells that might be built after the swarm had been returned.—M. MAHIN.

The plan you suggest with, or without its variations, will not work to my satisfaction. To keep the bees together I let them swarm, remove the brood to an upper story above the queen-excluder, and hive the swarm in the newly prepared brood-chamber below the queen-excluder. This prevents increase with less disturbance and less fussing than the plan you propose. In practicing my plan, I pay no attention to queen-cells, as they are cut off from the queen's domain by the perforated excluder.—G. W. DEMAREE.

Enameled Cloth for Winter Covering.

Written for the American Bee Journal

QUERY 744.—Is the use of enameled cloth desirable to cover the brood-frames in Winter?—Illinois.

No.—R. L. TAYLOR.

No.—J. M. HAMBAUGH.

No.—G. L. TINKER.

I do not advise it.—J. P. H. BROWN.

No. We take them off for Winter.—DADANT & SON.

I have never used it, preferring heavy muslin; although some successful bee-keepers do use it.—MRS. L. HARRISON.

I have used it satisfactorily in the cellar, but prefer the regular board cover.—C. C. MILLER.

Not with me. I use a sheet of duck or best cotton cloth, and over this I place a sawdust cushion, 4 inches thick.—G. M. DOOLITTLE.

I do not think it desirable in your climate, as you need some absorbing material, such as a quilt made of burlap, etc.—P. L. VIALLON.

I do not like enameled cloth. I do not use it in Winter or in Summer. I think it very unsuitable for Winter, either in-doors or out. I prefer an inch pine board.—M. MAHIN.

I do not use it myself, as I prefer a cushion or quilt from 3 to 4 inches thick, made of some material that will not hold and retain moisture.—J. E. POND.

Not unless it is used during the Summer. I use the same covering both in Winter and Summer; but I winter my bees in the cellar.—EUGENE SECOR.

I have discarded it and all other cloth. I could find no benefit in its use, when comprehensive and careful experiments were made with it.—JAMES HEDDON.

No. I have experimented a great deal on this line during the last 25 years, and have come to the conclusion that a pine board with a bee-space under it is as good as anything.—C. H. DIBBERN.

Yes. I consider enameled cloth the best thing used by bee-keepers to cover frames in Winter. It is next to a cover glued on perfectly tight. It is best used with a 4-inch cushion on the top of it.—H. D. CUTTING.

I use a great many enameled covers. I like them for Summer use, but they condense moisture in the Winter. I prefer a porous cloth to go next to the bees in the Winter time. I am quite sure that enameled cloth is dangerous to the lives of the bees, if they occupy a small department for Winter quarters.—G. W. DEMAREE.

It is better to use burlap.—THE EDITOR.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75 for the three.

◆

Free Trial Trip subscriptions are coming in quite rapidly. We thank our friends for this new illustration of their personal interest in the BEE JOURNAL. We want thousands to read it for a few weeks who did not know of its existence. Do not be afraid of sending too many names. Let us have the name and address of every person who keeps bees in America.

CORRESPONDENCE.

MISSOURI.

The Bee-Keepers in Counsel at Mexico, Mo.

Written for the American Bee Journal

BY J. W. ROUSE.

The Missouri State bee-keepers' annual convention was called to order on Oct 22. at 2 p.m., at Mexico, Mo., by President R. B. Leahy.

After the reading and approving of the minutes of the Marshall Convention, 16 members responded to roll-call, and 14 new names were added to the list.

The report of the Secretary was then listened to, and on motion was approved. Then followed the

PRESIDENT'S ANNUAL ADDRESS.

Fellow Bee-Keepers and Friends :—It devolves upon me as your President to deliver to you what our by-laws call the annual address. I am somewhat at a loss just how to frame this address, but after I am through you will, perhaps, pardon me for my short-comings, and endeavor to bring out in the discussions to follow what I omitted.

This Association is now one year old, and we have fairly launched upon the sea of life, hoping that our voyage may be prosperous, and that this noble new industrial ship may frequently enter harbor with overflowing cargoes of nectar. This is not the first Association in this State of like character, though its predecessor was different in many respects. It was different in that it embraced a smaller territory than this ; it was held at one place, and its members from a distance soon grew tired of making a long pilgrimage to its annual meeting point,and those near its established seat equally soon grew tired of playing its footstool. It did not increase in membership ; was moved to Kansas City, and there it died, with some three or four members holding a wake over its remains. It has been buried three years.

One year ago we organized the present Association at Higginsville, and this body has started forth with every promise of success before it. At its first meeting some twenty members were enrolled, and at Marshall, last April, as many more were added. Benefiting by the experience of its predecessor, its conventions cannot be held twice in succession in the same town, thus enabling many bee-keepers to attend its sessions without having to travel a long distance to do so. Other advantages are derived under this rule, among which I might add the fact that it does not devolve upon one set of men to carry the Association on their shoulders. Its meetings are held semi-annually, giving us an opportunity twice a year to compare notes of the past, and indulge in interchanging ideas for the future.

Our last Convention was held in the city of Marshall. It was successful, instructive, and profitable. New and old ideas and methods were discussed and examined, and each left with the proud conviction that the intercourse with his fellows had been one of profit as well as pleasure.

The question of adulteration of extracted-honey has been most prominently before this Association since its inception. It is a question that interests us all to a high degree, and it is but right and just that the question be agitated and held prominently to view. It is a question that concerns two classes of people, viz. : bee-keepers first, and the people at large, second. If we do not agitate the question no one will do it for us, and it behooves us to hammer away at it until every drop of glucose stuff is driven from the market.

At the Higginsville Convention one year ago a committee was appointed to examine the law on the matter, and it reported at Marshall by reading the law governing the adulteration of food and drinks. A committee was then appointed to draft resolutions on the subject, and it presented the following report :

"WHEREAS,It is known to this Association that extracted-honey is largely adulterated with glucose and grape sugar, and, as in our opinion, the practice is damaging to the producers of honey in this State, and a fraud on the general public, therefore be it

"*Resolved*, That this Association does emphatically denounce the practice of adulterating extracted-honey with glucose or grape sugar ;

"*Resolved*, That we urgently request the Bee-Keeping Associations of the different States, and others, to co-operate with us in presenting this subject to the consideration of the International American Bee-Association, that they may memorialize Congress to pass laws regarding the matter ;

"*Resolved*, That a copy of these resolutions be sent to each State Bee-Keepers' Association, and others."

The Secretary was instructed to request a reply to these sentiments from the Associations to which he sent these resolutions. What these are the Convention knows from the Secretary's report. With this resume as to what this Association has done in this matter, I would again say, do not let it rest here.

The statistics gathered at the Marshall Convention showed satisfactory and encouraging prospects for the season. Reports were received from 1,980 colonies, Fall count, and these had reduced to 1,909 colonies, Spring count, or a decrease of about 3⅔ per cent. This was a very good report, but the dry season greatly damaged the honey-crop, which, in many localities, was only 50, and in others 33⅓ per cent. of what it should have been with a good season. But this partial failure has also many advantages. It resulted in securing a better price for honey, and placed or forced on the market much old honey, thus cleaning the store houses of the producers, and opening the market for fresh goods next season. The late rains we had, and the encouraging growth and hardihood of honey-producing plants, and especially white clover, during the past few months, have all inspired new hopes and confidence for a large crop next year. With these matters before us, and the recollections that it is not all sunshine and success in any other industry, bee-keepers have, in my opinion, little room for complaint.

Since I have but a few hours to serve as your President, I do not wish to enter into a number of recommendations for the future action of the Association, but will leave them for my successor. Yet there are a few things I wish to call to your attention.

I would recommend that every member of the Association invite and urge his neighbors to attend the sessions of the Convention, and especially those who adhere to the old box-hive. It is here where the methods of practical bee-keeping are discussed, and there is no better plan to break up the box-hive and side issue business than to introduce their advocates to the methods and devices here presented and discussed.

The successful business man, no matter what line of industry may hold him, is continually alert for new devices, appliances and methods for pushing the trade or profession in which he is engaged. These devices and methods are carefully examined, and if they do not prove either labor saving or money saving, are given a wide berth. If the bee-keeper desires to make a success of his chosen pursuit, he must be equally alert, and not only carefully examine the new methods, devices, appliances, and ideas presented, but put all the push and energy he can command into the business ; watch every opportunity, and take advantage of every point gained. Every box-hive and side issue man who can be converted into the cause is a point gained for the uplifting of the business,and better prices. I say converted into the cause, because you can bring nine men to adopt the improved methods and devices where you can drive one out of the business.

There are a few characteristics for the bee-keeper who wants to succeed to note and develop. These are necessary to his success, and should be cultivated with every opportunity. The first of these is morality. This is necessary in any pursuit, and if you will look about, you can readily perceive that fifty moral men succeed where one immoral one does. But in bee-keeping it has a peculiar influence not felt elsewhere, and coupled with patience, the two elements make a first essential, which, if lacking, will alone cause failure. Without patience, as we all know, the handling of bees is dangerous, and where morality does not exist,patience is apt to be lacking.

Add to these two characteristics,industry and perseverance, cast them in one mold, and you will produce a being who will make bee-keeping a success.

An organization made up of such men can accomplish a wonderful amount of good, not only to their cause, but the people at large. Of such men, I take it, this body is composed, and success is certain if we will grasp it. But to make it a success every member must bring into display the qualities I have named, enter into hearty co-operation with his fellows, cultivate a brotherly feeling toward one another,stand united, and work for the interest of each other. In this way we can develop an association which will not only accomplish great good, but in which the social and instructive features are worth many times more than the effort has cost us.

Moved by Morton and Robinson to suspend the rules and take up a proposed amendment to the Constitution. Carried.

G. P. Morton offered an amendment to the Constitution, viz. : To amend Article VI. so that the Convention can be held annually. instead of semi-annually, and three days, instead of two days. The amendment was lost.

The election of officers was next in order, and resulted as follows : President, R. B. Leahy ; Vice-Presidents, G. P. Morton for Central Missouri, J. S. Atkins for Northwest, John Nebel for Northeast, E. R. Garrett for Southwest, and J. W. Clark for Southeast Missouri. Secretary, J. W. Rouse ; Treasurer, R. Gaines Robertson.

It was moved that a question-box be established on the same basis as the Marshall Convention. Carried.

It was moved that the members be given the privilege to discuss the questions in the box. Carried.

The President appointed Messrs. Nebel, Baldwin and Atkins as committee on the question-box.

It was moved to use question in box as a programme. Carried.

The prepared programme was taken up as the regular order.

"Should bee-keepers encourage the patenting of bee-fixtures?" It was opened by J. W. Rouse as follows:

Brother Bee-Keepers:—I hope I am only expected to open this subject for discussion.

It is our opinion that bee-keepers should not encourage the patenting of bee-fixtures. While we will admit that there are many fixtures used that bee-keepers could not afford to do without, even should they cost double their present price (as a patented article always costs more, if not double, than it would if not patented), still we must enter a protest on patented fixtures, and will give reasons for our opinions.

In the first place, if all bee-fixtures were patented that are now used, there would be a great many less bee-keepers on account of the increased cost of fixtures.

It may be possible that some would not count this a great calamity, but if this idea should be carried out in all the productions of the land, we think it would be a very great calamity.

Again, there is scarcely any fixture of any kind now used that is the invention of any one person, but what is a combination of two and sometimes of many more persons' invention.

While there are now some patented fixtures, the royalty on them prevents their general use more than fixtures not patented.

Besides these reasons a great many more might be given against the patenting of fixtures; but we believe these are sufficient to open the subject for discussion, but will further add that in all our intercourse and experience with bee-keepers, we have always found them of a very liberal mind, and communicative of bee-knowledge.

We remember when we first started in the business of visiting a noted bee-keeper, now a member of this Association, and while he found us very inquisitive, he answered all of our questions, and gave us a great deal of valuable information besides, and in addition to all that lodged us while there free of cost to us, and treated us to the first honey we had had for quite a while.

We have ever endeavored to carry out this same liberal spirit since then, except on one occasion, and that was when a patent-right man lodged with us we charged him for it, but have since repented of our actions, as we learned he was a victim of another patent-right man, and if he should ever have occasion to visit us again, we hope to treat him more liberally.

We do not wish to be understood that patent-right men are not liberal minded, because we have some grand men in our ranks that have patents. But our intercourse with each other, and our conventions and bee-literature, all seem to us to be in a different rather than the patenting spirit.

J. Nebel—I never believe in patents, and especially on bee-fixtures. They are generally impractical. Some fixtures we could not do without even if patented. I have some patented hives, but do not want them for Italians. They may do for blacks. Most patents are not practical, and I am opposed to patent fixtures.

G. P. Morton—While I feel more or less of an inventive turn, and favor patent rights, believing that patents have been a great incentive to improvement, I am opposed to patenting bee-fixtures in general. It would raise the price of fixtures, if loaded with a patent, necessitate the sale of a territory, and thus limit the inventor himself as to territory. A small article, such as a smoker, will do well enough when patented; but, as a general rule, a patented article in bee-fixtures nearly always goes into obscurity.

Heddon's hive is loaded with a patent, making it very expensive, and beyond the reach of most bee-keepers. A patent concern cannot be changed without renewing or vitiating the patent.

J. W. Rouse—I do not know that I entirely oppose the patenting of some articles. Patents would keep us from manufacturing many articles.

J. M. Haley—An inventor ought to have compensation for his invention, and bee-keepers ought to be willing to pay something for using them.

Mr. Pew—I never saw a patented hive of any account.

R. B. Leahy—It may look strange to look at these ideas from a business standpoint. When I first started I used the Simplicity hive. I make a hive of my own, and there may be something about it which I might patent, but when the idea occurs, it is accompanied with another thought, and there the idea stops.

H. O. Calhoun—We ought not to encourage patent bee-fixtures unless of marked merit, and sold cheap.

G. P. Morton was called upon to condense the discussion.

Mr. Morton—So far as the discussion extended, it was in opposition to the patenting of bee-fixtures in a general way. A few fixtures, when made cheap, might be patented.

EVENING SESSION.

"Which is the most profitable to produce under the present market prices, comb or extracted honey?"

Mr. Larch—It depends on location. In many localities we sell little extracted-honey, and comb-honey sells readily, and *vice versa*.

Mr. Nebel—Every year is not alike. When honey is scarce, extracted-honey sells readily. When we have a good year farmers sell too cheap—ten cents in trade. In that condition of the market practical bee-keepers lose. It depends also on locality. I run both ways, and can produce twice as much extracted as comb honey, consequently the extracted pays me best.

R. B. Leahy—I want to bring out a few points that should not be overlooked in this discussion. There is a good deal in what a man is adapted to. I never did like to handle comb-honey. We must have nice, white, clean sections for comb-honey. In a poor season many are only partially filled; no bee-bread must be in them; they are expensive to ship; the sections and starters add to the expense. With extracted honey it is different. Less care is required, less trouble, less expense in shipping, and the combs can be used again.

Mr. Morton—I arranged 6 colonies for the extractor; 5 of them produced 100 pounds of honey in 30 days. From 16 colonies I got 900 pounds of honey, of which 55 pounds was extracted. I can sell twice as much extracted as comb honey.

Mr. Pew—I think there is more money in producing extracted-honey in my locality. I can sell ten pounds of extracted to one of comb-honey, and the extracted is easier to produce.

Mr. Atkins—We turn all our attention to comb-honey, and where I sell one pound of extracted I dispose of 500 pounds of comb-honey.

Mr. Calhoun was called upon to condense the discussion.

Mr. Calhoun—As I understand it the sense of the Convention would be that the production of extracted-honey is the most profitable.

"What are the relative merits of the races of bees amongst us?"

With this question the following was also submitted: "Will the Italian bees be diminished in their good qualities by crossing with the German or any other race of bees?"

Mr. Baldwin—I know nothing of any bees but Italians. They suit me. It takes careful work to keep my Italians' blood up. A lower kind of the same species will degenerate a higher. A race above the Italians would lift them up.

Mr. Haley—Where the Italian bees degenerate, do not the lower races gain some?

Mr. Baldwin—The progeny from an Italian queen crossed with a black drone is better than that of a black queen crossed with an Italian drone.

The further discussion of the question was laid over to the second day.

Mr. Rosser—How long will a comb be good for brood-comb in a hive?

Mr. Nebel—I have some 18 years old.

Mr. Larch—I have combs used for 20 years.

Mr. Atkins—I have combs that have been used 15 years.

"What is the best method to stop robbing?"

Mr. Morton—I have had but one experience. I put the hive containing the robbing colony on the stand of the robbed, and *vice versa*.

Mr. Rosser—The best thing I have tried was to put a sheet over the hive being robbed.

Adjourned till 9 a.m. on Thursday.

THURSDAY MORNING.

The Convention was called to order at 9 o'clock.

It was moved that the Convention take up the questions in the box for discussion. Carried.

"Do flowers furnish the same amount of nectar every year?" The committee says "No."

"What is the future outlook for the bee-keepers of Missouri?" Committee says, "Not very flattering."

Mr. Rosser—I think the prospects are good from the start clover has now.

Mr. Atkins—In my county the clover prospect is fine.

Mr. Morton—I think the prospect for the future as good as the past.

Mr. Baldwin—It is well to look to the future with hope, but facts are stubborn things. The future prospects lie more in the bee-keepers' management than in anything else.

"Should we use queen-excluding honey-boards under all circumstances in the production of extracted-honey?"

Mr. Baldwin—Yes.

Mr. Nebel—It is not necessary under all circumstances.

Mr. Pew—I would not do without them.

Mr. Morton—I find them work to my satisfaction, and approve of them.

Mr. Collier—I would use wood if I could not get zinc; it pays.

"How shall we elevate the moral standard and social taste of our Italian queens above associating with black drones?"

"Is a sectional brood-chamber a beneficial adjunct to a hive?" No.

Mr. Morton—It is patented.

"What treatment for laying workers?" The committee says, "Introduce a fertile queen.

A Member—Will the laying worker kill the queen?

Committee—Not if the queen is introduced right.

The question of the location of the next meeting was taken up. Jefferson City, Boonville, St. Louis and Macon City were named. A ballot being cast resulted in the selection of Boonville, and the time for holding the Convention was, on motion, set between April 1 and 10.

Moved, that the President appoint a committee of three on resolutions to report at 5 o'clock. Carried. The President appointed Messrs. Nebel, Rouse and Morton.

AFTERNOON SESSION.

The Convention was called to order at 1:30. The question as to the relative merits of races of bees was taken up for further discussion.

Mr. Collier—I have had 11 years' experience with Italians; have had bees considerably mixed up; have watched them and their proceeds. The Italians are the best defenders of their homes; they are gentler to handle. On close examination I cannot see that the blacks dress honey any nicer.

Mr. Pew—I have had experience with four races; the Holy Lands do not suit me, and I got all I want of the Carniolans in one season. I now try to keep my Italians as pure as possible.

Mr. Nebel—I have tried different races, and want only Italians now.

Mr. Baldwin condensed the discussion—As I understand the discussion, the Italians are preferable in Missouri; the blacks have some points above, but the weight of the argument is in favor of the Italians.

"What importance is there attached to the brace-comb annoyance in the manipulation of hives?" It depends on the amount of them.

"What does the bee coming from the field laden with honey do with it on entering the hive?" Store it in combs, of course.

Mr. Robinson—I think that Mr. Doolittle says they deliver it to the nurse-bees, and they store it in the combs.

"How to dispose of a surplus of pollen in extracting combs?"

Mr. Pew—If I should find any I would put it down in the brood-chamber.

"Is it practical to re-queen colonies after swarming?

Mr. Robinson—Sometimes it is necessary. If you remove all the queen-cells but one, and it fails to hatch, it is necessary to re-queen.

"Have you had any trouble in getting queens fertilized in old colonies this year?" No.

"Do young queens always go out to be fertilized? Yes.

The committee on resolutions reported as follows:

Resolved, That we extend the thanks of the Association to the people of Mexico for their interest in our Association, and for courtesies extended to us.

Resolved, That we extend thanks to the proprietors of the Ringo House for their offer of the free use of their parlors for the Convention.

Resolved, That we extend thanks to the officers of the county, and especially to the sheriff, for the use of his room in the Court House for the Association.

Resolved, That we extend thanks to the newspapers for printing notice of meeting, and also publishing proceedings from time to time.

The resolutions were adopted and ordered spread on the minutes.

The following statistics were handed to the secretary:

Members.	Colonies. Spring.	Fall.	Comb.	Ex.	Wax.
T. A. Pew	60	57	361	1,025	.....
L. C. Cheatham	40	70	945	......	8
John Nebel & Son	258	265	100	1,000	100
R. B. Leahy	23	33	25	300	25
Byron Iiams	62	70	......	3,300	30
E. C. L. Larch	168	168	500	11,500	.....
G. P. Morton	16	23	350	550	10
R. Gaines Robertson	21	37	425	315	......
William Davis	72	97	100	500	20
J. S. Atkins	76	108	2,000	500	20
J. W. Rouse	54	54	500	500	35
J. R. Rhodes	25	40	500	1,200	30
M. B. Robinson	62	92	400	4,000	75
P. P. Collier	65	85	300	800	47
W. E. Thompson	21	30	600	....	
A. M. Creel	60	75	1,500	......	......
J. N. Rosser	18	28	500	......	3
L. W. Baldwin & Sons	550	900	20,000	......	......
P. Baldwin	111	165	6,500	......	......
E. R. Garrett	45	80	500	500	......
H. Martin	53	53	400	3,600	.....

Moved, that 200 copies of the minutes be printed. Carried.

Adjourned *sine die*.

J. W. Rouse, *Sec.*

BROOD-CHAMBERS.

The Best Size for Comb-Honey.

Written for the American Bee Journal

BY DR. G. L. TINKER.

After many years of experiment and observation Fathers Langstroth and Quinby each arrived at the conclusion that the brood-chamber for a colony of bees should contain 2,000 cubic inches of space to give the best results, and as they produced mostly comb-honey in their time, it would seem, if they were correct in their conclusions, that the brood-chamber they used would still be the best size for comb-honey; and I believe that the nearly 40 years of experience by thousands of other bee-keepers has confirmed their conclusions in regard to the hive, and the system of management they had adopted.

The question now arises, Whether, during the past 40 years, there have been improvements made in hives or in the system of management pursued that might, in any considerable degree, modify the well-established conclusions of two of the ablest bee-keepers America has produced? The writer claims such improvements have been made, and believes that there are very few who think to the contrary; yet we find to-day the vast majority of bee-keepers in this country using essentially the old hive, and the old system of the Fathers in apiculture, which is a grand testimonial to their worth in this age of rapidly advancing ideas!

The first decided improvement in hives affecting those conclusions was the invention of the double-walled or chaff-hive, which was designed to winter bees more safely. The original purpose in making double-walled hives was achieved, and along with it another result that does not seem to have been anticipated. This result was the fact that larger colonies could be developed earlier in the Spring in these double-walled hives, through the incidental protection given, than could be developed in the old-time single-walled hives. The fact was made clear that protection to the brood, by providing a warmer hive, resulted in more extensive brood-rearing, and at last it became apparent that the average queen, through the protection given, was able to fill more than 10 standard Langstroth frames, with brood occupying 2,000 cubic inches of space.

The inference followed that with favorable conditions the 10-frame Langstroth hive was too small for breeding up of a full colony in the Spring! Since, as a matter of fact, the average queen is capable of filling 13 standard Langstroth frames with brood in the protected hives, when *only 8 frames, not wholly full of brood* in the 10-frame, single-walled Langstroth hive, is possible before the first of June in all Northern localities. Now a difference of five frames of brood in every colony at the beginning of the white-clover bloom is quite an item in the way of getting a crop of honey. But such is the result of proper protection to a colony of bees well provided with stores in the Spring, and hence there is no mistaking the fact that 2,000 cubic inches of breeding room in a double-walled hive is insufficient for the best results.

Another improvement in hives requiring a modified brood-chamber is the invention of the queen-excluder. When used in working for comb-honey it affords advantages, and effects results superior to every other known system of management, with a brood-chamber of the proper size. In this fact we have abundant and ample evidence to warrant this assertion, so we have another reason for modifying the old style of brood-chambers.

In connection with the queen-excluder we have an improved management known as "the contraction system." It has the sanction of nearly all of our ablest bee-keepers, and in all white-clover districts you can hardly find an old and expert bee-keeper who will not say that he cannot succeed in producing comb-honey without contraction of the brood-nest. It may be and *is* carried out on nearly all kinds of frame-hives by means of division-boards, etc., that, though very troublesome and taking much time, is yet practicable. But with a brood-chamber of the proper size, all the contraction that is advantageous or ever necessary is done by means of the queen-excluder. No division-boards or other troublesome clap-trap being necessary. So that here again we have an urgent need for a modified brood-chamber.

The position of several well-known writers on the question of large *vs.* small hives is well known to the readers of the BEE JOURNAL; but the circumstances affecting these differing conclusions of our modern apiarists have not been made as clear as they might be. In certain localities there is almost a continual flow of nectar, from the opening to the close of the season. All experience seems to prove that in such localities no contraction is necessary, and that a large brood-chamber is of the greatest utility. On the contrary, in most localities (say 99 out of 100) where the season for surplus closes with the white clover or basswood bloom, a large brood-chamber is only required to breed up a sufficient force of workers, after which, and during the balance of the season, a contracted brood-chamber gives the best results.

In these localities of limited honey-flow it has been the practice with most bee-keepers to hive all swarms in large brood-chambers, like the 8 or 10 frame Langstroth and Simplicity hives. Thousands of such hives were sold the past season, and the larger number will be used to hive swarms without contraction, and the result will be the same as it always has been in working for comb-honey—with these old style of hives—a great loss of surplus, and no surplus worth mentioning except on the very early swarms. The colony casting the swarm, and also the swarm making no surplus except the season is an unusually favorable one. There is simply the *increase* and the *demand*, year after year, for more hives of the same worthless pattern that has blasted the hopes of bee-keepers all over this country, until it is no wonder that the vast majority consider bee-keeping a small business with no money in it. It will be understood that these remarks apply only to the production of comb-honey. No one questions the value of the Langstroth and Simplicity hives in the production of extracted-honey.

Now, I should not care to write in this way without a remedy in sight, but all of these difficulties in the way of hives and hive management may be overcome by the use of the queen-excluder and a brood-chamber of the right capacity; and the right capacity for a brood-chamber is one made just one-half the size of that required for the most successful Spring breeding, which has a capacity of 1,660 square inches of brood-comb instead of only 1,350 as in the 10-frame Langstroth, and about 1,050 in the common 8-frame hive.

Now it so happens that the above small brood-chamber is the best size in which to hive all swarms in working for comb-honey; and again, a two-story hive of such brood-chambers is far safer for out-door wintering in double-walled hives than any of the old style of hives, and with the return of Spring it is in the best possible shape for Spring breeding, the matter of spreading brood-combs to facilitate breeding being entirely superfluous. The brood-chamber recommended is a shallow one, made 7⅜ inches deep to carry a 7-inch brood-frame, and the capacity should be for 830 square inches of brood-comb. Two of these stories make a hive of almost the exact capacity of Dadant's large hive that is now so popular in all localities where a continuous honey-flow during the season is the rule. The management of storifying hives for extraordinary results in comb-honey production is given in many new books, and will be further considered in forthcoming articles.

New Philadelphia, O.

AMUSING.

Mrs. Bricktop's First Experience with Bees.

I had an improved back-yard. I went through a seed store, and bought a sample of everything that would grow in this climate. The result was a perfect tangle of flowers and things, from an overgrown sunflower to a forget-me-not. Mrs. Bricktop is very proud of our garden, and while gushing over it the other morning a happy thought worked its way under her black hair.

"What a very delightful thing it would be to have a hive of bees and raise our own honey, as well as everything else." I have always thought that woman inspired ever since she convinced me that I couldn't do better than to marry her. This was an original, bold idea–a happy thought. I promised her a hive of bees, and went to business with a lighter heart and firmer belief in the genuineness of home comforts and amusements. I bought a hive of honey-bees, and brought it home with me that very night. It was one of those patent hydrostatic, back-action hives, in which the bees have peculiar accommodations and all the modern improvements. It was a nice little hive—none of your old-fashioned barn-size affairs. It even had windows in it, so that the bees could look out and see what was going on, and enjoy themselves.

Both myself and Mrs. B. were delighted, and before dark I arranged a stand for the hive in the garden, and opened the bay windows so that the bees could take an early start, and get to business by sunrise the next morning. Mrs. B. called me "honey" several times during the evening and such sweet dreams as we had.

We intended to be up early next morning to see how our littles birds took to our flowers, but a good half hour before we probably should have done so, we were awakened by the unearthly yells of a cat. Mrs. B. leaped from her downy couch, exclaiming, "What can be the matter with our yellow 'Billy'?" The yells of anguish convinced us that something more than ordinary was the matter with him; and so we hurried into our toilets. We rushed out into our back-yard, and oh! what a sight met our astonished gaze! The sight consisted of a yellow cat that appeared to be doing its best to make a pin-wheel of itself. He was rolling over and over in the grass, bounding up and down, anon darting through the bushes and foliage, standing on his head and then trying to drive his tail into the ground, all the while keeping up the most confounded yowling that was ever heard. "The cat is mad!" said Mrs. B. affrighted. "Why shouldn't he be? the bees are stinging him," said I comprehending the trouble.

Mrs. B. flew to the rescue of her cat, and the cat flew at her. So did the bees. One of them drove his drill into her nose, another vaccinated her on the chin, while another began to lay out his work near her eye. Then she howled and began to act nearly as bad as the cat. It was quite an animated scene. She cried "Murder!" and the neighbors looked out from the back windows and cried for the police, and asked where the fire was. This being a trifle too much, I threw a towel over my head and rushed to her rescue. In doing so, I ran over and knocked her down, trod upon the cat, and made matters no better.

Mrs. B. is no child on a wrestle and she soon had me under her, and was tenderly stamping down the garden walk with my head, using my ears for handles. Then I yelled and some of the bees came to her assistance, and stung me all over the face. In the meantime the neighbors were shouting: and getting awfully excited over the show; while our servant, supposing us fighting, opened the basement door and admitted a policeman, who at once proceeded to go between man and wife. The bees hadn't got at Mrs. B.'s tongue yet and she proceeded to show the policeman that I had abused her in the most shameful manner, and that I had bought a hive of bees on purpose to torment her into the grave.

I tried to explain, but just then a bee stung the officer on the nose, and he understood it all in less than a minute. He got mad, and actually lost his temper. He rubbed his nose, and did some official cursing. But as this did not help matters at all, he drew his club, and proceeded to demolish that patent bee-hive. The bees failed to recognize his badge of office, and just swarmed on him. They stung him wherever he had no clothing, and some places where he did have it. Then he howled, and commenced acting after the manner of the cat and its mistress. He rolled on the ground for a moment, and then got up and made for the street shouting, "Fire!"

Then the bees turned to the people who had climbed upon the fence to see the fun. Windows went down, and some of the neighbors acted as though they thought a 20-inch shell was about to explode. By this time a fire-engine had arrived, and a line of hose was taken through the house into the back-yard. One of the hosemen asked where the fire was, but just then one of the bees bit him behind the ear, and he knew. They turned a stream upon that half-wrecked bee-hive, and began to "play away" with one hand, and fight bees with the other. But the water had the desired effect, and those bees were soon among the things that were.

A terrible crowd had gathered in the meantime in front of the house, but a large portion of it followed the flying policeman, who was rubbing his affected parts, and making for the station-house and a surgeon.

This little adventure somehow dampened our enthusiasm on bee-culture. During the next week we wore milk-and-water poultices pretty ardently, but not a word was said about honey; and now Mrs. B. has gone to stay a week with her mother, leaving me and the convalescent Tom-cat, and the tickled neighbors, to enjoy our own felicity.—*San Francisco Paper.*

CALIFORNIA.

Alfalfa for Honey in the Sacramento Valley.

Written for the Pacific Rural Press
BY S. L. WATKINS.

On a recent trip to Sacramento and Yolo county, I visited Mr Adam Warner of Clarksburg, Yolo county, an extensive apiarist who keeps bees in both counties. I found Mr. Warner at home. He had just finished taking off about a ton of honey, mostly in one-pound sections. The honey was as fine, both in color and flavor, as any I have seen this season.

"What kind of a crop did you have this year, Mr. Warner?" I asked.

"Not very large," he answered; "a little over a ton. You see the high water kept things back so much last Spring, that the bees did not have a chance to do much."

"That is very fine honey," I remarked. "By the look of it I should think that it was gathered from alfalfa."

"No doubt part of it was; but the honey this year I don't think is as good as that I had last year. I have noticed, though, that the honey, raised the last few years, is a great deal better than that obtained when Mr. Harbison kept bees here."

"That is, no doubt, owing to the wild growth being cleared out and replaced with alfalfa, fruit bloom, etc.," I answered. "About how many colonies have you, Mr. Warner?"

"I generally keep between 250 and 300 in six different apiaries. I give the ranchers $20 a year for the privilege of keeping bees on their places. How many colonies do you think can be safely kept in one apiary, taking it season for season?"

"Well, that is hard to tell," I answered. "I have heard of keeping between five and six hundred in one apiary, but that is in the lower counties, where there is excellent bee pasturage, and where bees gather from three to five hundred pounds to the colony. In your location I think you could safely keep 100 colonies without overstocking. A great deal depends on the season. Some seasons there is abundant pasturage for 1000 colonies in one location; and again 25 will overstock it, in unfavorable seasons. I once kept 130 colonies in one apiary in El Dorado county, and they did first rate."

"Yes, I am sure I could profitably keep 100 colonies in one location without overstocking; in fact, I am going to try it next season. In the future, I intend to devote all my time to bee-keeping. I have sold all my stock and intend to rent my ranch, so that I can spend all my time with the bees."

"Have you ever tried the Carniolan bees?" I asked.

"No; these I have are hybrids and Italians, and they are splendid bees for honey gathering. I have heard about the Carniolans being very gentle. A bee-keeper told me that they did not sting at all."

"Oh, yes, they will sting as well as any other kind of bees," but with proper handling you can look through a good-sized apiary without getting stung. Carniolan bees cap their honey very white and use little or no propolis, so that it is a pleasure to handle frames and sections; they gather as much honey as any race of bees, and are excellent defenders of their hives against robber bees. Do you have any trouble by bees robbing here in your apiaries?"

"No, bees don't rob here; at least none of mine ever have. I have heard that some bee-keepers have great trouble by robbing."

"It is only in certain localities that bees rob each other very badly, I observed. "As long as there is sufficient pasturage for them to work on, there will be no trouble. In Placerville we sometimes have considerable trouble with robber bees, but higher, in the mountains, bees rarely if ever rob. I see your hives are the Harbison style. Do you practice artificial swarming, or do you allow your bees to swarm naturally?"

"No; I divide all my colonies of bees. I divide them once, and then try to keep down all natural swarming afterward. There is considerable in knowing the right time to divide. I wait until the hive is overflowing with brood and bees and then divide. Some bee-keepers divide too early in the Spring, which I think puts them back too much and takes them too long to get started again. I want all my colonies strong—every one of them."

"But don't your bees still persist in swarming after being divided?" I asked.

"No;" after being divided once, I give them plenty of room, and they generally settle down to business, and very few of them ever swarm. Runaway swarms have a hard time in seeking a suitable habitation in a country like this, where there are so few hollow trees; they will go in old buildings, barns, chimneys, almost in any place where there is not much noise; sometimes they build out in the tules, but are generally swept away by the high water in the Winter-time."

Grizzly Flats, Calif.

CARNIOLAN BEES.

A Business Comparison with Italian Bees.

Written for the American Bee Journal

BY JOHN B. BLACK.

I offer the following in the controversy on Carniolan bees:

Mr. Shuck, on page 633, says: "I have consulted three volumes of *Gleanings*, and two volumes of the AMERICAN BEE JOURNAL for reports concerning Carniolan bees, and I fail to find any figures to show that any one has ever compared the results of these bees with the results obtained from Italian or black bees in the same apiary."

This is just what I have been doing this year. I had 4 colonies of Carniolans in the Spring. No. 1 gave me 50 pounds of surplus honey, and one swarm. No. 2 yielded 40 pounds of surplus and one swarm. No. 3 gave 56 pounds of surplus and two swarms. No. 4 produced 12 pounds of surplus and one swarm.

I had 19 full colonies (3 blacks, 12 of ordinary Italians, and 4 of my best Italians). They stand on my Register as follows: No. 5, 5 pounds of surplus. No. 6, 20 pounds. No. 1 gave one swarm. The bees in a five-chamber hive, containing three queens, gave 20 pounds. The rest gave nothing.

My object is to satisfy myself and those who keep but one kind of bees. If my Italians fall behind next year, I shall procure stock from another breeder, and give them one more trial. I have no advice to give, and no queens to sell.

I procured a fine Benton queen; two from Pennsylvania; and six from Kentucky; but my best queens are of my own rearing. I keep a minute record of each colony, and I write this with my Register before me. This has been a poor season for honey, particularly the early part of it; but my bees increased to 30 colonies, and I have them all snugly stored in the cellar, with plenty of food to winter them over. I use the Simplicity hive, and produce only comb-honey.

Pattonsburg, Mo.

HONEY EXHIBIT.

Premiums at the Illinois State Fair.

Written for the American Bee Journal

BY MRS. L. HARRISON.

When I was a child, my parents (who were very orthodox) taught me, that the devil would get me if I told lies. I have always been very much afraid of that terrible monster, who "goeth about like a roaring lion, seeking whom he may devour," and switching his tail.

With reference to the premiums obtained upon the product of the bees at the late Illinois State Fair, I said on page 707, that "Iowa carried off the blue," which means in fair parlance, that she won the first premium, on both comb and extracted honey.

This exhibitor from Iowa (I do not remember his name), had more honey there than all other exhibitors put together, and Mrs. Harrison was one of them. When I first saw this Iowa exhibit, I said to the owner: "You will carry off the blue." He said: "Do you think so?" "Certainly," I said, "It is the largest and best."

He had made crates of one-pound sections, so many that he could not obtain space to exhibit them. His extracted-honey was put up in cute little glass-pails, which were strung on wire, in front of a large window, and presented a very fine appearance. I do not know how many gross he had of them, but I do know that he could not find room to exhibit them all. I am in hopes that he found space enough at the St. Louis Fair, where he took it from here.

I have never seen a printed list of those who obtained premiums, in the apiarian department at the late Fair. If I had thought it of enough importance for the world at large to know, I would have copied them from the secretary's book.

I am "posted" thus far—Mrs. L. Harrison had on exhibition one dozen and a half of Mason jars, of one and two quarts, filled with choice extracted-honey, of the crop of 1889, and the same honey drew "the blue" at the fair 1889. This year it was awarded a short piece of red ribbon with Illinois State Fair printed upon it, and three dollars in money; the money was the best part of it.

Some bee-keepers complained that they could not attend the sessions of the North American Bee-Keepers' Association, at Keokuk, Iowa, because their honey-crop was a failure; but I went, for I was awarded three dollars at the Illinois State Fair.

I am glad that Aaron Coppin also drew three dollars (see page 828) so will all bee-keepers be, and it is quite important that they should know it. It is something to be proud of, that a little bit of comb-honey drew the second premium, because there was none to come in competition with it. Aaron should have also said in the AMERICAN BEE JOURNAL, that he was awarded the *blue*, for being the best grumbler at the Illinois State Fair.

Peoria, Ill.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 1, 2.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

Jan. 16, 17.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood. ..Starkville, N. Y.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Insuring Bees.

On page 811 E. L. Plumb asks about insuring bees. I have my bees, valued at $5.00 per colony, insured in the Phœnix of Hartford, Conn., for two-thirds their value while in the cellar. My house and furniture, bees and fixtures, are insured at farm rates, $1.00 per hundred, or 1 per cent. for 5 years. L. EASTWOOD.

Waterville, O., Dec. 9, 1890.

Under a Cloud.

Our favorite pursuit is under a cloud at present, owing to the extreme drouth that is prevalent throughout this section of Illinois. Plant growth is brown and seared, and springs dried up; and unless we are soon blessed with copious showers or snows, wheat, clover, etc., will be dead, making agricultural and honey production among the uncertainties for another year. J. M. HAMBAUGH.

Spring, Ills., Dec. 5, 1890.

No Losses in Winter.

I keep 30 colonies of bees for my own amusement, and they have done fairly well this season. They averaged about 25 pounds of honey to the colony. The honey harvest was very short here last spring. I am 72 years of age, but take great pleasure with my bees, which I winter in a cellar, and have had no losses. D. E. NORTON.

Independence, Mo., Dec. 8, 1890.

Candied Honey.

In the report (page 758) of the International meeting I am made to say, "We exhibited eleven tons of honey at the Colonial Exhibition," and the inference is that this constituted our entire exhibit. The same statement is repeated in the Official Report just published. I would have taken no notice of this, had I not been taken to task some time ago as to the quantity actually shown by us on that occasion as stated by me. What I did say at the International was, "That we had eleven tons of candied honey, all in 60-pound tins, which had to be liquefied and run into small receptacles to suit the English purchaser." I was referring at the time to the unforeseen difficulties, and the unthought-of expenses attending a large honey exhibit. It is not likely we went to England to set up a display of honey before the eyes of the world, all of which was done up in 60-pound tins. It would be a rather tame spectacle. R. McKNIGHT.

Owen Sound, Ont., Dec. 8, 1890.

Basswood in New Jersey.

Will some one please inform me if there are any basswood, or native sugar-maple woods in Northern New Jersey?

Trenton, N. J. JOSEPH EOHRET.

Northwestern Pennsylvania.

The honey crop in Northwestern Pennsylvania is a complete failure; so much so that it is doubtful if half of the colonies will winter excepting those which have been fed. White clover never blossomed more profusely than during the past season, but for some reason—the weather perhaps—there was no honey in the blossoms, and the bees just skipped the white clover. Basswood has not yielded any honey in this vicinity for three years. GEORGE SPITLER.

Mosiertown, Pa., Dec. 8, 1890.

The Pacific Coast.

Allow me to say to Mr. C. Theilmann, in regard to his advice, not "to listen to boomers," that Washington does not need any booming, for its climate, the health of the people, and its wealth-producing facilities all speak for themselves, and although not a bee country as yet (it being comparatively new), the prospects for bee-culture are equally as good, if not better, as those of Minnesota and many of the older States. JOHN BOERSTLER.

Vashon, Wash., Dec. 4, 1890.

A Favorable Outlook.

The few warm days of last month found my bees on the wing, and everything indicates successful wintering. The bees are in chaff hives, and are still on the Summer stands. J. M. YOUNG.

Plattsmouth, Nebr., Dec. 6, 1890.

Japan Clover.

In reference to Japan clover, page 809, I will say to D. E Barker that I have spent three Springs in Tennessee, near Memphis, where there was Japan and white clover, and I never saw a bee on the former, while they were plentiful on the latter, and though there were large fields of both, I never was able to find any white-clover honey that was stored in May (that is the white clover month there). On June 10, 1889, I left my bees. Before going I took out all of the surplus, and divided the unfinished sections among those that I thought would need it, and on returning, the last of March, 1890, I found 1 section of clover honey, and 3 others that had some in them, which, I think, was gathered from the second crop of red clover, as the white was all dead when I left, and the bees that gathered it were hybrids. I did not find any in the hives of the blacks. This is the opinion of T. M. Edwards, a close observer, and a man of large experience in apiculture in this country. THOS. C. STANLEY.

Boyleston, Ills., Dec. 8, 1890.

Accounted For.

Joshua Bull's article on Nectar, on page 810, very definitely states the reasons for the poor honey-flow during the season in this locality (Allegany Co., N. Y.). I secured but 600 pounds of white-clover honey from my 22 colonies of black bees, spring count, and no Fall honey. My bees have increased to 40 colonies. CHAS. TASEY.

Houghton, N. Y., Dec. 4, 1890.

Honey Tank.

I wish some one would describe a good honey tank, or a receptacle that can be used as such? I use a barrel, but in spite of all the tightening of hoops and waxing, it will leak. ALBERT VOUGHT.

Illaware, La., Dec. 2, 1890.

HONEY AND BEESWAX MARKET.

CHICAGO, Nov. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Nov. 28.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Dec. 13.—Comb honey in good demand at 15@17c per lb. Extracted, 7@9c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Dec. 6.—We quote: Fancy 1-lbs., white, 16@17c.; 2-lbs., white, 13@14c. Off grades, 1-lbs., 13@14c.; 2-lbs., 12 cents. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 11 cents. Extracted, white clover and basswood, 8½@9c buckwheat, 6½@7c.; California, 6¾@7¼c.; Southern, 65@70c per gallon. Market has been inactive for weeks. Beeswax, 25@26c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, MO., Dec. 13.—Comb and extracted honey is not selling as fast as we would like to see it. Market is quiet. We quote 1-lb. white comb at 16@18c; 1-lb. dark, 12@14c; 2-lb. white, 14@15c; 2-lb. dark, 12@13c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 12.—There is a good demand for all kinds of honey. Arrivals are fair of all but comb honey and Southern extracted. Small lots only of each are arriving, and are sold immediately. California honey seems to be as highly appreciated in our market as the best clover honey. We quote choice comb honey nominal at 16@18c per lb. Extracted honey at 5½@8c per lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Dec. 12.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, Nov. 28.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 7@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., Dec. 6, 1890.—The honey market is quiet, but stock is light and prices well sustained. We are selling white at 16@20c; mixed, 14@15c; buckwheat, 13@14c. Extracted, white, 8½@10c; amber, 7@8c; dark, 6@6¼c. Beeswax, 28@30c.
H. R. WRIGHT, 326-328 Broadway.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Send us *two new* subscriptions, with $2.00, and we will present you with a "Globe" Bee-Veil for your trouble. (See the fuller notice in the advertising columns.)

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.25 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages) $1 00
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☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book by mail, postpaid. It sells at 50 cents.

☞ A "Binder" made especially for the AMERICAN BEE JOURNAL, and lettered in gold, makes a very convenient way of preserving the copies of the BEE JOURNAL as fast as they are received. We offer it, postpaid, for 60 cents; or as a premium for *two new* subscriptions, with $2.00. It cannot be mailed to Canada.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

Those Who Have any honey to dispose of should use the Honey Almanac as a salesman. We have a few left for this year, and offer them at **one-third** price. See page 847 of this paper.

Advertisements.

THAT QUEEN I got of you IS A DAISY; well pleased.—P. B. Bluhm, Temperance Hall, Tenn., June 24, 1890. Try the **Five-Banded Golden Italians.** Orders booked now—pay when Queens arrive. Enclose stamp for prices.
JACOB T. TIMPE,
51A1t Grand Ledge, Mich.
Mention the American Bee Journal.

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf
Mention the American Bee Journal.

BEES AND HONEY
The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

LOOK HERE.—E. S. Vickery, of Hartwell, Ga., writes on July 6, 1890: "The Queens I got of you have the yellowsst bees I ever saw." Orders booked now for either FIVE-BANDED GOLDEN, or Root's HONEY Italian QUEENS. Pay on arrival. Enclose stamp.
JACOB T. TIMPE,
51A1t GRAND LEDGE, MICH.

Buy Cheapest of the Manufacturers.

THE LARGER THE MANUFACTURERS
THE CHEAPER YOU CAN BUY.

We are the Largest Manufacturers of

BEE-KEEPERS' SUPPLIES,

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NEW MACHINERY,

And 60,000 square feet of Floor Surface. We must have **10,000** New customers, so you will find our prices VERY LOW and our goods the finest. Send for Catalogue and Price-List, or write for special prices on what you want.
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JAMESTOWN, N. Y.

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Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

NEW FACTORY.

BEE-HIVES, SECTIONS, FRAMES, ETC. We have moved into our new factory, which is the largest and most complete in the world. We make the best of goods, and sell them at lowest prices. Write for free Illustrated Catalogue.
G. B. LEWIS CO., Watertown, Wis.
35Atf

GROUND CORK
For Packing Bees in Winter.

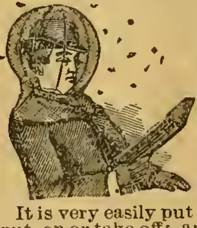
THIS consists of small pieces about the size of a pea, and is an excellent thing for packing Bees in winter. Prices: In original packages of 100 pounds, $4.00, measuring 14 bushels.; smaller quantities, 10 cents per lb.; or a seamless sack, containing 15 lbs., $1.00.
THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

HONEY

WE are now ready to receive shipments of **HONEY,** and would be pleased to open correspondence. Liberal advances made on consignments. Prompt returns. Quick shipments of **Comb and Extracted** will meet an active market. Reference on file with the American Bee Journal.
S. T. FISH & CO., 189 So. Water St.,
□33A20t CHICAGO, ILLS.

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

☞ **Discolored by Smoke.** ☜

The netting of a quantity of these Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each, two for $1.10,** or **four Veils for $2.00.** They are practically just as good as ever, but slightly soiled. To secure these, **Order at once.**

We will send this Veil and the BEE JOURNAL one year, for **$1.50**; or we will give the Veil **FREE** for **two NEW subscribers** to the BEE JOURNAL—[or one for the BEE JOURNAL and two for the HOME JOURNAL] for one year, with $2.00 for the subscriptions.
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EVERY Farmer and Bee-Keeper should have it. The

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Prices: By mail, $1.50. To dealers, $1.00. In 100 lots, by freight, 50 per cent. off.

Address, **A. J. COOK,**

35Atf **Agricultural College, Mich.**

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PERFECTION

Cold-Blast Smokers,

Square Glass Honey Jars, &c.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.

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To succeed in Apiculture? Then try the **Nonpareil Bee-Hive and Winter Case.**

Send for Catalogue of prices, and enclose 25 cents in stamps for the new book, "BEE-KEEPING FOR PROFIT," and you will not regret it.

Address, **DR. G. L. TINKER,**
45Atf New Philadelphia, Ohio.

Mention the American Bee Journal.

BEESWAX WANTED.

Beeswax.—We will pay **26 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
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THIN FLAT BOTTOM FOUNDATION

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Sole Manufacturers.
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Mention the American Bee Journal.

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RARELY is such a collection of valuable ideas embodied in a pamphlet like this. Its scope is as broad as its title, and the matter is presented in a concise, "boiled-down" manner, giving experience of many in few words. Among the subjects treated are these: Economy; Prosperity and Adversity; Character; Health; Remedies; Mistakes of Life; Is Life worth Living; Domestic and Household Affairs; Planting and Culture of Vegetables; Planting, culture, trimming and training Vines, Trees and Plants; Bees, Poultry, Live-Stock, Farm Topics, Pithy Paragraphs, etc. It is neatly bound in paper covers, and has a comprehensive index.

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WE have arranged with the publishers of GREEN'S FRUIT GROWER, to offer that well known and popular Monthly (12 times a year) to our subscribers, when clubbed with this journal, at a very low price.

GREEN'S FRUIT GROWER

is a pioneer in Horticulture, established ten years ago. Its Editor is a practical fruit grower, editing from his own vineyards and orchards. "It contains more practical information on Fruit Culture than any other journal," says Matthew Crawford.

☞ SUBSCRIPTION PRICE of the Monthly FRUIT GROWER alone is 50 Cents, or when clubbed with the American Bee Journal, **$1.30**; with the Illustrated Home Journal, **80 cents**; or all three for **$1.70**.

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We desire to get our friends all through the country to aid us in increasing our list of Subscribers to the

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We make the reader this proposition: If you will get us **Two New Subscribers** to the BEE JOURNAL, or **Four** for the HOME JOURNAL, with $2.00 for the year, we will **present** you with either of the following Books, as you may choose:

DOOLITTLE'S QUEEN-REARING,

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Is the most ably edited and the best printed Agricultural Journal among our exchanges. It is published at Pittsburgh, Pa., and the publishers claim the largest circulation of any Farm Weekly Paper in America. The subscription price is $1.50 per year.

We offer this Paper with the

American Bee Journal for 1891,

For **$1.95**—or with the

Illustrated Home Journal for 1891,

For **$1.40**—or all three for **$2.35.**

The balance of 1890 will be sent Free, to all New Subscribers, to all three publications.

This is a rare bargain, and the sooner the Subscriptions are received, the more numbers of 1890 will be sent Free. If a Sample Copy is desired, send a Postal Card for it to the NATIONAL FARMER AND STOCKMAN, PITTSBURGH, PA.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. Dec. 27, 1890. No. 52.

EDITORIAL BUZZINGS.

We wish all our readers and patrons

"A MERRY CHRISTMAS,
and a prosperous and
HAPPY NEW YEAR."

Twenty-Six Volumes of the Bee Journal are now complete. It is old and tried, and has been ever faithful to its trust. Its past history is its guarantee for the future.

The Investment of a dollar in the Bee Journal, gives you 52 dividends in a year. Can any one desire a better investment? or will they ask for richer returns?

Look Over the numbers of 1890, and if any are missing, send for them at once—before all are gone.

A Full and Complete Index is published in this Journal. It will be very valuable for those who keep the numbers for reference and binding. It covers not only the subjects, and the illustrations, but also the names of correspondents, and the pages containing their articles or letters.

Our Thanks are hereby tendered to all our friends, not only for their patronage during the past 17 years, but for their influence exerted in favor of the Bee Journal, and for their assistance in sustaining its character and excellence during that time. We hope they will continue to do the same for the coming year.

Mr. W. I. Buchanan, of Sioux City, Iowa, has been appointed the Chief of the Bureau of Agriculture of the Worlds' Columbian Exposition. In a letter to us dated Dec. 13, 1890, he says:

> I beg to assure you that in accepting the appointment as chief of the Bureau of Agriculture of the World's Columbian Exposition I do so relying largely upon the enthusiasm and hearty support of the press of our country, interested as yours is in all that goes to further the interest of those engaged in agricultural pursuits. I have full confidence that with your co-operation and assistance, this great department of the Exposition will be an unqualified success. I shall at all times be glad to have suggestions from you, and will give them careful consideration.

We are heartily glad that Mr. Buchanan has been selected for such an important position, and Bee-Keepers may be sure of due consideration for the Exhibit which they intend to make, at the coming World's Columbian Exposition. We respectfully commend to him, the two gentlemen selected at the late Convention at Keokuk, of the "North American Bee-Keepers' Association," as its choice for superintendents. For the United States, Dr. A. B. Mason, Auburndale (Toledo) Ohio, and for Canada, R. McKnight, Owen Sound, Ont. With these experienced men as superintendents, we shall fully expect a grand exhibit of bees, honey and apiarian appliances, and we hope that Mr. Buchanan will see to their appointment as soon as possible, and then aid them in every way to make the Bee and Honey Show eclipse anything that has ever before been made in the whole world.

Mr. J. M. Clark, the Honey merchant of Denver, Colorado, gave us a call last Saturday. He reports the production of Colorado as increasing very rapidly. In 1888 it amounted to 200,000 pounds. In 1889 it increased to 300,000 pounds and this year it approaches very nearly to 600,000 pounds. It is mostly gathered from Alfalfa; the next best honey-producer being Cleome.

Bee-Conventions will be held during the next few months in many localities. The most convenient thing at such gatherings is the Convention Hand-Book. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the Bee Journal, besides your own renewal (with $2 to pay for the same), or 2 subscribers to this Home Journal may be sent instead of one for the Bee Journal.

The Bee-Keepers' Review for December comes to our desk in a cover, and enlarged. It is bright and spicy as usual, and deserves success. The price will be increased to a dollar for 1891. It will be clubbed with the Bee Journal for $1.75. No club subscriptions will be entered for less than this, after Dec. 10, 1890. Those who send the old rate will only be credited for the *Review* for six months. As friend Hutchinson gave no notice of this increase, it could not be corrected before this week in our Clubbing List—(see page 857).

Subscribers whose time does not expire for some months can safely renew at any time, without fear of loss, because we always extend the time from the date of expiration on our books. If you want any other magazine or newspaper, we can furnish it, and save you money by clubbing it with the Bee Journal. See our list of a few of them on page 862.

The Honey Almanac for 1891 will be issued in a few days. The prices will be the same as last year, but several improvements have been made. A sample will be mailed for 5 cents.

The Report of the National Bee-Keepers' Union may be found in this week's Journal. The Voting Blanks will be sent to all members in a few days, and if any desire to become members (and every bee-keeper ought to feel it a privilege to do so), they should send to this office for Blanks, and use them at once.

Reader, the Bee Journal is working for your interest every day in the year, and now you are respectfully invited to work for its interest, by devoting a few hours to get a *new* subscriber for it, and thus help to make it still more valuable and useful to the pursuit.

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our Journal—please let your neighbor know it, and let us thank you in advance for this favor.

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

GLEAMS OF NEWS.

The Southern California Bee-Keepers' Association, at its last meeting adopted a preamble, constitution and by-laws, elected a full set of officers and is ready for business. Delegates were in attendance from San Diego, San Bernardino, Orange and Los Angeles counties. The initiation fee is $1.00, and the yearly dues are $1.00.

The constitution provides for auxiliary Associations wherever seven persons who own and handle bees can be brought together to form such an association—such Associations are entitled to send representatives to the parent Association.

No provision has been made for honorary membership, but corresponding members may be elected by the Associations from among the bee-keepers in any part of the world. No fee is required from this class of members, but it is required of such members to give exact and reliable information of anything of interest to progressive bee-keeping that may come to their knowledge, particularly as to new inventions in appliances for the apiary, and discoveries in scientific bee-keeping, reporting to this association the discovery of any new strains of bees that would be an improvement over the kinds now owned and handled in the jurisdiction of the Southern California Bee-Keepers' Association.

A badge has been adopted to be presented to each member upon his initiation, made of sky-blue silk ribbon with a devise on it of a Queen bee surrounded with worker bees, with a legend, "The Southern California Bee-Keepers' Association," all in gold.

The membership is made up of practical progressive men who for the most part have been in the business in this locality for many years and fully understand the needs of the fraternity in all respects.—*Rural Californian.*

The Wax-Scales or wax-plates as they grow, or are formed on the bees, are five-sided, very thin, semi-transparent, and exceedingly brittle, requiring preparation by the bees before they are in a fit state to build combs with. If a bee is plunged into water, the scales of wax may easily be detached with the point of a needle, when they will rise on the surface of the water, and can be examined with ease, or they may be mounted as specimens to show the state of wax in its first secretion. To get some idea of how this wax is formed, we have only to form an idea as to how tallow or lard is produced, and then know that nearly the same process is required to form honey into wax, which is required to form meal or food of any kind into animal fat.—*Exchange.*

Milk and Honey.—The chronicler of old could think of no language in which to clothe his idea of a really-good country than to discribe as "a land flowing with milk and honey," and if the signs of the times are not wonderfully misleading, that is to be the truthful description of the United States in the near future. It will delight thousands to learn that the use of milk as a beverage is so rapidly on the increase that the dairy lunch rooms are numbered by the dozen to-day where they were unknown two years ago; and that, at both the hotels and restaurants milk is being much more largely used as a beverage. It is an ill-wind that blows good to no one, and in this movement we can see good to all concerned. The honey will follow suit, for our apiaries are annually on the increase, and many can now be named that produce from 5,000 to 25,000 pounds annually.—*Exchange.*

Queen-cells which are large and corrugated are said to produce much better queens than do those which are small and smooth. Those queen-cells which have their cover cut off smoothly and evenly by the queen when emerging, and in which the royal jelly is not all consumed give superior queens. A scarcity of royal food means smaller or imperfect queens.—G. M. DOOLITTLE.

Enraptured.—This is the opinion of one who sent for a sample copy :

I am enraptured over your beautiful and artistic HOME JOURNAL, and inclose 50 cents for a year's subscription.—A. T. COOK, Hyde Park, N. Y.

We hope the reader will think and do the same as Mr. Cook, after examining the sample sent last week.

QUERIES and REPLIES.

Distance Necessary to Prevent Impure Fertilization.

Written for the American Bee Journal

QUERY 745.—How far would colonies of Italians used for queen-rearing need to be removed from hybrids to prevent their crossing with the hybrid drones?—Subscriber.

At least three miles.—DADANT & SON.

At least three miles.—P. L. VIALLON.

Five or more miles.—G. M. DOOLITTLE.

Five or six miles.—J. M. HAMBAUGH.

Probably five miles would do.—EUGENE SECOR.

From five to six miles, to make it sure.—JAMES HEDDON.

Some say half a mile, but I think I should feel safer at three miles.—C. C. MILLER.

I should prefer five miles ; yet in many cases a less distance will do.—H. D. CUTTING.

I think five miles would be pretty safe.—R. L. TAYLOR.

From six to ten miles. They frequently cross at four miles distance.—J. P. H. BROWN.

Not less than three miles. I have no faith in the half-mile theory.—C. H. DIBBERN.

One to two miles for practical purposes of queen-rearing. To insure absolute safety they should be about seven miles apart.—G. L. TINKER.

I doubt if any one knows. I should say from four to five miles at least. Of course they might not mix, if separated only two miles, but who knows that they might not? I should prefer even six miles.—A. J. COOK.

Three miles at least. I have *known* black bees to be crossed with my own Italians at full three miles "in a bee line." Whether that distance is far enough I cannot say, but think it fairly safe.—J. E. POND.

When there were no Italian bees but mine in the neighborhood, a black queen nearly five miles away produced yellow-banded bees, and had mated with a drone from my apiary. If there are mixed bees within four or five miles, some queens are liable to be mismated.—M. MAHIN.

I do not know ; some persons report seeing large swarms of drones high in the air. They may have regular trysting places for all I know. Where many colonies of Italians are kept, other bees stand a poor chance. Italians are boss, whether at a pan of feed, in the field, at war—or in love.—MRS. L. HARRISON.

In answering this question, some guessing is absolutely necessary. In my opinion drones rarely ever fly more than one or two miles from their home. This "guess" is based on years of practical experience. If there were no hybrids or other race or varieties of bees in two miles of my apiary, I would expect to see 98 per cent. of my Italian queens purely mated.—G. W. DEMAREE.

It would hardly be safe to count on pure fertilization if there were impure bees within five miles.—THE EDITOR.

Convention Notices.

☞ The Annual Meeting of the Ontario Bee-Keepers' Association, will be held in the city of St. Catharines, on the 7th and 8th of January. All interested in bee-keeping are cordially invited to attend.
W. COUSE, Sec., Streetsville, Ont.

☞ The Annual Meeting of the Indiana State Bee-Keepers' Association, will be held in the Agricultural Rooms, State House, Indianapolis, Jan. 16, 17, 1891. GEO. C. THOMPSON, Sec., Southport, Ind.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The 22d Annual Meeting of the New York State Bee-Keepers' Association, will be held in Agricultural Hall, Albany, N. Y., on Jan. 22-24, 1891. Reduced Railroad Rates. Pay full fare to Albany, and we will give you return certificates over any road coming into Albany (except the Boston & Albany) at one-third of the regular fare. A cordial invitation is extended to all. Come and bring your friends with you. A complete programme will be published as soon as completed.
GEO. H. KNICKERBOCKER, Sec., Pine Plains, N. Y.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.
MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

Supply Dealers should write to us for wholesale terms and cut for Hasting's Perfection Feeders.

CORRESPONDENCE.

QUESTIONS.

How to Select Colonies—Extracting from Brood-Combs.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

A correspondent writes, "I desire to purchase some bees in the Spring, Will you please tell me how to select good colonies, and what prices I ought to pay?" A majority of persons, especially beginners, are apt to think that if a hive is heavy with honey and there are live bees in it, such are the ones to purchase, without any regard to what kind of comb there is in the hive, or the size of the colony.

This is a mistaken idea. Good combs and plenty of bees are of far more value than honey. As there are those at the present time who still persist in keeping bees in box-hives, and the bees in such hives can be purchased for less money than they can in frame-hives (besides, the frame-hive might not be to the purchaser's liking), I would select box-hives, and then transfer to such hives as suited me.

The colonies may be selected any cold day during the months of March and April, by turning the hive over carefully, so as not to arouse the bees. Examine the combs carefully and see that they are all straight and nearly all worker comb, and there should be bees in at least five spaces; or in other words, the bees should enclose four combs, while six to eight spaces filled with bees would be all the better, with from ten to fifteen pounds of honey. If possible, select such colonies as cast a swarm the previous season, or a second swarm, as such will have young prolific queens.

Persons having bees for sale in box-hives, do not, as a rule, read the bee papers, so they do not know the difference between a good stock-hive and a poor one, and will make no distinction in price as to those having young queens and good combs, for all are alike to them.

About the price. Four dollars is the usual amount asked for bees in such hives during April, but I have seen colonies sold for eight and ten dollars, that were worth but little more than the honey that was in the hive; and I have seen colonies sold for two dollars that were better worth ten dollars than others would be as a gift. The same holds good as to frame-hives. A person had better pay ten dollars for a hive that has the frames filled with straight worker combs, well-stocked with bees, than have a hive with the combs built crosswise of the frames, with two-thirds of that drone comb, and an old, poor queen, given to him for nothing.

EXTRACTING FROM THE BROOD-COMBS.

"When I am working for section-honey, my bees are prone to store more or less honey in the brood-combs. Had I better extract this honey occasionally?" is a question sent in by another correspondent. I have been a careful observer, and find that when bees are at work best in the sections there will be scarcely a pound of honey in the brood-frames, providing that the body of the hive is not too large. I mistrust that the trouble with this correspondent, is that his brood-chamber is too large, so that the first honey which comes in goes into the brood-combs instead of the sections. But the extracting of this honey would only make matters worse, for it would give the bees a chance to put more honey below, instead of going into the sections as we wish.

If any one expects to get a large yield of comb-honey and use the extractor on the brood-combs at the same time, they certainly will not realize their expectations. After the bees get thoroughly at work in the sections, let the brood-combs alone, and you need have no fear of the queen being crowded, for as soon as the bees are thus occupied they will carry the little honey they may have in the brood-combs, with a hive of the proper size, up into the section, thus giving the queen abundant room.

For instance: I have taken nine Gallup frames, well filled with sealed-honey, hiving a good strong swarm of bees with a good queen in such a filled hive, putting on the sections before hiving the swarm, and in form 14 to 18 days (if honey is coming in from the fields) every bit of this honey and all the bees had gathered, not consumed by the brood, would be in the sections.

Once more: If you let a first swarm issue from a hive and keep them from swarming again, (allowing the hive the swarm came from, to remain on the old stand,) by the time the young queen commences laying, every available cell in the brood-chamber will be filled with honey, and still no start be made in the sections; but as soon as the queen gets to laying to any amount, the bees will commence to work in the sections, and I have known every section to be completed in ten days from the time of commencing, under such circumstances.

Examine that hive in 18 days and you will find scarcely a cell of honey in the brood-combs, and as nice a lot of brood as you ever witnessed. Now, we will suppose that just as this queen was fertilized the honey had all been extracted from the brood-combs, not a single pound of section honey would have been obtained, in all probability, unless it came late in the season from buckwheat or Fall flowers.

Bees will always store honey in the brood-chamber, in preference to the sections, when there is empty combs or empty cells there, and the more extracting of these brood-combs the more empty cells we give, unless the queen has the cells occupied with brood, in which case there will be no honey to extract. Again I repeat it, if you wish a large yield of section-honey, keep prolific queens, and let the brood-combs alone, after they are once filled with brood in the Spring.

Borodino, N. Y.

BEE CELLARS.

Rats and Mice in a Bee Cellar.

Written for the American Bee Journal
BY G. B. REPLOGLE.

I was somewhat surprised to find my query (No. 742) answered in this week's BEE JOURNAL. It has been so long since I sent it, that I had given up ever hearing from it. Well, it was like the doctor coming several days after the death of the patient. The following item will tell how it turned out. I must explain a little. We did not fasten the bees into the hives, but left the entrances open and the covers on. I believe it would have been better to have had screens on top, than the covers. The cellar was very dark and rather warm, with no chance to ventilate it properly. The explanatory item is as follows:

On the 17th of November we put 60 colonies of bees into a cellar; on the 28th we took them out again. They had never become quiet during the 11 days of their confinement, and, when taken out, quite a number of the colonies showed symptoms of diarrhea. The second day after taking them from the cellar, they had a good flying time and spotted the hives as badly as bees usually do after a confinement of six weeks. We now have them snugly packed at the sides and back, with leaves and soft blue-grass hay, and shall await with considerable anxiety the outcome of the experiment.

Too high a temperature and annoyance by rats running over the hives seemed to be the cause of their uneasiness in the cellar. When bees are uneasy in confinement they will constantly gorge themselves with honey, which accounts for the symptoms in the present case.

This was our first attempt at cellar wintering, and it will be our last, until such time as we may be able to build a repository that can be controlled in respect to ventilation and temperature, and rats and mice are rigidly excluded.

Centerville, Iowa, Dec. 13, 1890.

[The Query Department is not the place to get immediate replies. Each Query has to take its turn, and it takes several weeks to get a batch of Queries ready, send them out, get replies, and then to put into print. The very full answers given to the Query on page 821 will be of value to others, if not to you now.—Ed.]

FOUL BROOD.

Some very Important Questions Propounded.

Written for the American Bee Journal

BY WM. M'EVOY.

I have just read friend Koeppen's letter on page 808, and as I have seen one or two colonies of foul brood in my time, I would be very much pleased if he would answer me the following questions through the American Bee Journal.

1. You say that in May your 37 colonies were well and in good condition; do you mean that they were free from foul brood?

2. You say you found seven diseased in June, and gave the cure Mr. Pringle named. I have not seen that Journal. Will you please tell us just exactly what you did? and at what time of the day you treated them?

3. In July, you say that you had 12 or 14 more colonies diseased; and to urge them to stay, you put in some foundation. About how much foundation did you put in? and at what time of the day did you do that?

4. You say that some that you cured in July caught the disease again this Fall, will you please tell us exactly how you cured them? at what time of the day you treated them? how far apart your colonies are from each other? and whether you treated them all at once, or part one day and part another, and so on?

5. You say that your colonies were all in good condition in May; that being the case, how many swarms did you get? and how did you treat them?

6. As you say your colonies were in good condition in May, how much honey did you get, this season?

7. Which have you ran most for, comb or extracted honey? If extracted, where do you extract from—the top story or the brood chamber?

8. Where do you winter your bees? in a cellar or on the Summer stands? If in the cellar, what was the average temperature of it? If you wintered them on the Summer stands, how were they fixed or packed? at what time in the Fall did you pack them? and what time in Spring did you unpack them? or were they packed all Summer?

9. You say that you fed eight dollars worth of sugar, was that fed to colonies you were trying to cure? If so, please tell us exactly how you were treating them?

10. I see that you are now down from 37 colonies to 3, what sort of combs have those 3 colonies got, old or new? and about how much honey was there in them before you fed? please to tell us exactly what your feed was composed of?

11. You say that you had to put the bees together so much, that they have been reduced to only 3 colonies, what time in the day did you do the doubling-up of your colonies? Was it in the honey season you doubled them, or after it was over? Did you give them another set of combs, and try to cure the disease then, or what did you do? please tell us exactly what you did in your treatment at that time.

12. You say that almost all those that you put on foundation, left their hives, what about those that did not leave? How were they? Was the disease just as bad in them as in your others that were not given foundation?

13. In the Fall when the queens have done laying, if you remove all the combs and *do not either boil or disinfect* the foul hives, but at once put six combs into them, with *every cell sealed solid*, which have been taken from colonies that *never had the disease*, will foul brood start or break out in such hives again? If so, will you look very closely into this and explain in detail, giving your reason, backed by your own experience? please do not give me the experience of other men as I know all about what they think and guess at. I would give more for the opinion, backed by experience, of a good careful and close observer, that had tested and proved a thing that had been a success, than all the opinions ever guessed at.

14. Did foul brood originate in your apiary or did your bees get it by robbing at foul-brood apiaries? Did you buy any foul-brood colonies, or did you get any combs from any one during the last five years, or the time it started in your apiary? or, did you buy any honey and give it to your bees, in the last 5 years, as you claim to have the disease about that long? How far are you located from other apiaries? and are they free from foul brood?

15. What did you do with all your combs? Have you any left? If so, are you going to use any of them?

16. You seem to think that it would be a hard thing to cure, by the sealed combs' plan, in the Fall, because you say you could not get enough sealed combs to make the experiment!

Pardon me, dear friend, when I tell you that in your apiary the sealed combs would be foul, and it would not do to use them, when the whole apiary has been so badly diseased that out of 37 colonies in May you have only three colonies now!

But here is a question I would like you to answer. If your colonies were all sound and free from foul-brood, but a few, could you not feed the sound ones in the Fall, until the combs were sealed, and then go in the *evening* to your foul colonies and remove the diseased combs, and give sealed combs from the sound colonies which you fed—could you not do that? if not, why not? You might say that you could buy sealed combs from some other bee-keeper. Now, friend, pardon me again, when I tell you that the risk is too great! I would not use any sealed combs from an apiary, unless I examined the apiary they came from first. I have known many a fine apiary ruined by using combs that came out of foul-brood apiaries!

17. When your bees swarmed, did you put them in empty hives or hives filled with combs, or foundation? What kind of a hive do you use?

18. What is your other business, besides bee-keeping? Does the other business crowd you at the time your bees need the most attention? I will take it as a great favor, friend Koeppen, if you will answer these few questions through the American Bee Journal.

Woodburn, Canada.

INVENTIONS.

Improvements which are yet Undiscovered.

Written for the Western Plowman

BY C. H. DIBBERN.

Bee-keepers often boast of the wonderful improvements that have been made in the last twenty-five years, and with good reason. Within this period was invented the honey-extractor, comb-foundation, honey-knife, solar wax-extractor, bee-smoker, section honey-boxes, queen-and-drone-traps, queen-cages for sending by mail, bee-escapes, and many more articles of great value to our pursuit.

As I look back over the past, I sometimes wonder what more the future has in store for us. Do we now know it all? What will bee-keeping be, in a hundred years from now?

Well, one thing I do know, and that is we are not yet at "the end of the string," by a good deal. Just as important discoveries remain to be made, and we have a keen lot of bee-keepers who will move heaven and earth to bring them to light. We are going to have better bees, better hives and better section-cases; in fact, everything better that can be improved. Much of the labor now done by man, will be turned over to the bees, who can and will do it better and cheaper. The bees will be made to hive themselves in the near future. This device will undoubtedly be perfected during the next season. I am satisfied it will prove an entire success.

WHAT TO DO THIS WINTER.

Now, when the bees have all been snugly stored away, there will be a long time before they will need much attention. The successful bee-keeper must make good use of all the time there is, if he expects to keep "up with the times."

Be sure and subscribe for one or more of the bee papers, and read them carefully. It is during the Winter that they are at their best, as correspondents now have plenty of time to write out their thoughts and give the results of experiments that were overlooked or almost forgotten during the busy season. Look over some good standard work on bees, and although you may have read it before, it will be quite likely that you will gain many new ideas.

Look over your supplies, and if anything is needed you can usually get a discount by ordering now. Then many things can be made up at odd times now. This will keep your mind on the business, and is much better than loafing at the grocery stores. Many new things will come out in the near future, and it is well to see what they are and give them a trial. We want everything that is of any real value in our business. Eternal vigilance is the price of success.

RATS AND MICE IN THE BEE CELLAR.

Often I am told, that if it were not for the rats and mice bees would be wintered in the cellar. Now what kind of housekeeping is that, to allow these pests to take possession of the cellar? It may not be so easy to keep them out of the barn or corn cribs; but in the house cellar, where the vegetables, fruits, cream and butter for the family are kept, there is no excuse for their presence; nor in the bee cellar, where all should be quiet instead of the rats playing hop, skip and jump over the hives.

But some one says: The rats and mice are there, and how shall I get rid of them? Well, in the first place, the person who built the house was to blame in leaving any possible place for them to harbor. Stone, lime and cement are cheap, and every hole and crevice should be filled up. Should a mouse or rat hole appear anywhere, set a good trap and catch the rascal, and then be sure and plug that hole up. A cat or two is of great advantage in keeping them away. If a place is once overrun, nothing is better to drive them away than to put concentrated lye in every hole you can find, and along their runways.

Milan, Ills.

SWARMING.

Prevention of After-Swarming or Second Swarming.

Written for the American Bee Journal

BY R. DART.

I will give Mr. S. M. Carlyon my method of preventing second or after swarming. It is simple and, with me, it never fails to accomplish its work.

When the first or prime swarm leaves the hive, turn the hive, which it comes out of, a few feet to one side; place the new hive on the old stand; remove the crate of section, if not completed, from the old to the new hive; then run the swarm into the new hive. While they are running in, draw the frames, one by one, from the old hive and shake the bees off among those running into the new hive, leaving about one-half a pint of bees on the last frame in the old hive. Replace the frames in the old hive; shut it up till you put in your front blocks, leaving one inner working hole. At that time, or any time within a day or two, carry the old hive to a new stand, and your swarming from that hive is over for the season.

Do not remove any queen-cells that you may find on the combs of the old hive, and leave not over one pint of bees in the old hive, when you close them up. The combs at this season are full of unhatched brood, and it will not hatch fast enough to have bees on hand to send out second swarms when the first queen is hatched out.

When the first swarm leaves the old hive you will find, left on the combs, one-quarter of the whole swarm, too young to fly. These are the bees left that gives you the after swarming. Shake them among the new swarm while hiving, and your trouble is over.

The beginner in bee-keeping may say that this is too much work, and the chance of being stung is too great. I make all the manipulations and carry the old swarm to the new stand in ten minutes, with bare face and hands. If your bees are cross, puff a little smoke over the frames of the old hive.

I catch all of my swarms, as they come from the hive, in wire swarm catchers. I use three of them for 60 swarms. If you get all your honey in section, and use swarm catchers, to catch your swarms, your bees will not, as a rule, be cross, through the honey harvest. Hiving swarms from limbs of trees and other out-of-the-way places, and the use of the extractor, makes your bees cross for the whole season.

I do not think it will pay any bee-keeper to try to prevent the bees casting one swarm each during the honey harvest; but it will pay to prevent them from sending out more than that. If first swarms are coming too late, or too many of them, I send them back, cutting all the queen-cells out of the old hive first, and they will not often renew them and come out again.

With our poor crop this year, honey is cheap; we may get 12½ cents a pound, but we have got most of our honey on hand yet.

Ripon, Wis.

THE UNION.

The Sixth Annual Report of the National Bee-Keepers' Union.

In making my Sixth Annual Report to the members of the Union, allow me to say that while we all have much to be proud of, in the achievements of the past, we have nothing to be ashamed of—except, perhaps, the limited number of members.

When attorneys are defending cases in Courts, they often cite the suits previously decided, which favor their argument, or are analogous to it; and usually the "best hits" they make are the outcome of some "points" given to them by their clients. When bee-keepers are their clients, they should be able to point to "decisions" or "points of law" in favor of the pursuit, but unfortunately, until the Union began its work, there were none.

In the first case defended by the Union, Judge Clementson remarked: "This case involves new points of law, upon which there are no rulings of the Supreme Court. We have no law upon which to instruct a jury." That was in the Freeborn case, in Wisconsin, which the Union had defended so vigorously that the complainant lost his grip in the first round, and it was literally kicked out of Court.

We have now secured several decisions, notably the one in the Supreme

Court of Arkansas. These not only save trouble and annoyance to bee-keepers, but also expense to the Union—by the prevention of petty lawsuits.

Now, if City Councils or Town Boards are anywhere troubled by a complainant, and asked to pass an Ordinance "declaring bee-keeping a nuisance, and to prohibit it within the corporate limits," etc., every member, together with the Mayor, the City Attorney, and the one making the complaint, are all *dosed* with copies of the Supreme Court decision, that "Bee-Keeping is not a nuisance" *per se*, and the matter is at once dropped—killed by the "Decision of the Supreme Court of Arkansas!"

That Decision is our "Corner-stone of Defense!" It calls a *halt* in all such "careers of madness," and demands justice for the 300,000 Americans who are now engaged in the keeping of bees!

This good work should go on until we have such decisions in every State in the Union.

BEE-KEEPING NOT A NUISANCE.

The cry has been set up, that "Bee-Keeping is a nuisance"—that bees are trespassers,—and have no rights outside the apiary which ought to be respected; and that feeling was growing 5 years ago, and even threatened the very life of the pursuit.

Contemplating such a state of things, of robbing a person of his reputation, well did Shakespeare say:

> "Who steals my purse, steals trash;
> But he that filches from me my good name
> Robs me of that which enriches him not
> And makes me poor indeed."

If the pursuit was to be robbed of its reputation and good name, it would soon cease to exist. To set up a Defense, was, therefore, a necessity.

BEES NOT TRESPASSERS.

Instead of bees being trespassers, while gathering a few drops of honey from the flowers, they are positively required by the plants to fertilize them, and all Nature invites them to come to the feast, simply to carry the pollen-masses from flower to flower, and thus, as marriage-priests, to cause them to become prolific, and bear fruit in great abundance. In ignorance of this, many imagine that bees are trespassers, and destroyers of the fruit! Such nonsense vanishes before the revelation of scientific facts!

"If bees can trespass there is an end to bee-keeping (writes one of our members) for every bee-man will be at the mercy of a surly neighbor. Apart from their merits as honey-gatherers, bees are of incalculable benefit to market gardeners, florists, etc., in fertilizing flowers. If we had bees that could reach down to the honey-cells of red clover, they would be of inestimable value to the farmer, as red clover depends for fertilization on insects, mostly bumble-bees. We are satisfied that the reason why the first crop of clover has so little seed, is because there are not enough of the bumble-bees to fertilize it, so early in the season. We noticed in our meadows some heads were full of seed and others apparently equally as ripe without a grain. The bumble-bee had evidently been on the one and not on the rest. Some wise men may laugh at this, but it has been carefully *demonstrated* by Darwin, years ago, that when the bees are excluded, the clover seed does not form."

PROOF OF IDENTITY.

Then again, if any one should claim, in a lawsuit, that bees trespass, it is the duty of such an individual to prove the "identity" of the bees—that such bees belonged to the defendant. Can the plaintiff produce any one of the bees charged with trespassing? Suppose he can! Can he swear to identity? Perhaps he will be advised to say that he cannot. The moment he does that, the attorney for the defendant should demand a non-suit, saying that he can produce *cases* decided in favor of the bee-men on that very point. Custom makes law, and law is based upon equity in all constitutional countries. Such cases on "identity" have been decided in different countries—but always in the same way, where absolute proof of identity is lacking—by a dismissal of the case.

Under the actual administration of the law, the bee-keeper almost always escapes, for no one can recognize his bees; and alone, out of the hive, a bee has no owner, etc.

KILLING BEES MALICIOUSLY.

Take the question of killing bees by yeast or other poison,—because ignorant persons think they spoil fruit, etc.—should we stand this? I say, no, most emphatically. The owner of bees thus annoyed, should quietly proceed to get absolute proof that certain parties did on certain days set a poison to kill certain animals or insects, and when the proofs are all ready, then the National Bee-Keepers' Union would "go for" those parties, and force the case into court.

This brings to mind an amusing case decided some years ago in France. Mr. H. had an apiary within one-half of a mile of the largest sugar refineries in Paris. The sugar refineries brought suit against him for interrupting them in their business, stealing their sugar, etc., and the refineries lost the day, not once, but twice, and I think a third time.

Upon asking upon what point they were beaten, Mr. H. stooped to the ground, and, picking up a dead bee, said: "I filed a demand that they produce in court the bees that did the robbing, etc., and they brought a bushel of dead bees. Picking out one very carefully, I demanded of the plaintiff, will you swear that that bee is one of my bees? But there was no answer. I won the case each time, and moreover the Judge admonished the refineries to cover every door and window with wire gauze, and use every reasonable precaution to keep the bees out, or I might have just cause to go against them for killing my bees without necessity."

Suppose now that in America it were once established by law that to wantonly kill bees was a punishable crime! How quickly the owners of the deadly cider press and sugar refineries would have to *screen out* the bees—or the Union would be after them!

MAKING HISTORY.

Now, for half-a-dozen years we have been "making history," and getting "decisions of law," for the future guidance of judges, and for the instruction of attorneys who may be called upon to defend lawsuits against those who are keeping bees, and who may incur the displeasure of their neighbors, either through ignorance or malice. When such persons understand that bee-keepers stand by one another, and have a Union for Defense, they will respect us, and freely accord to us our rights.

THE WORK BEFORE US.

At Plano, Ill., we have a lawsuit begun which may yet reach the Supreme Court of Illinois. In Iowa, Wisconsin and Indiana there are also several suits begun—and if the plaintiffs develop sufficient stubbornness and wealth, any of them may land us in the Supreme Courts of these States—just where we want to try them!!

It will take money to do it, but it is the Supreme Court decisions that we need, for they will do more to guarantee to bee-keepers their *rights* and privileges, than anything else!

We have some hundreds of dollars in the Treasury for instant use when needed, and when we get some thousands (instead of hundreds) of dollars there, we can lead our opponents on to the Supreme Courts, and there gain decisions which will be of more value to us than any amount of money.

HOW TO BECOME MEMBERS.

As this Report will be sent to many not members, but who should become such, it may be well to say that the entrance fee is $1.00, and that pays for the Dues of any portion of the unexpired Calendar year, ending Dec. 31. Then it costs $1.00 for annual dues, which are payable every New Year's day, and must be paid within six months, in order to retain membership.

If membership ceases, all claims against former members also cease; and all claims to the protection of the Union are dissolved.

FINANCIAL STATEMENT.

Balance as rer last Report	$361.68
Fees from 373 members for 1889	373.00
Donations	.50
	$735.18
DISBURSEMENTS	$114.00
Balance, Dec. 18, 1890	$621.18

LIABILITIES.—The Union has engaged attorneys for the defense of several cases, the cost for which will have to be paid when they come up for trial—so we shall have use for all the money on hand and the dues for the next year—as the cases are reached on the Docket.

DUES AND ELECTION OF OFFICERS.

It now becomes my duty to call for $1.00 for the coming year, as dues from each member. A printed Blank is to be used for that purpose; and also a Voting Blank. Fill up all the blanks, and send to the Manager with a postal note or money order for $1 in the envelope sent with it. It must be received by Feb. 1, 1891, or the vote will be lost.

The General Manager has labored without the hope of reward, except such as comes from a consciousness of having done his duty, and is fully prepared to welcome his successor as soon as elected.

THOMAS G. NEWMAN, *Manager*.
246 Madison Street, Chicago, Ills.

"ROOTVILLE."

Some Gossip about the Root Family at Medina, O.

Written for the American Bee Journal

BY DR. C. C. MILLER.

We have had the younger "Root" at our house. I captured him at Keokuk, and took him home with me. He got away from us the next Monday, but his visit was a rare pleasure while it did last. He differs a good bit from the senior. Lacking some of his father's brilliancy, he is more even. You do not have to watch him so closely to see where he will turn up next.

Although the junior, I am not sure but he is the principal editor, of *Gleanings*. Each has his own individuality, and a decided individuality it is. They do not by any means always think alike. Notwithstanding the well-known brilliancy of the father in striking out in new directions, his long experience acts as a brake sometimes when new things come up. I should be sorry indeed to have the day come when the two should always think just alike. The wonder to me is that there is always such harmony of feeling in spite of real differences of opinion. Perhaps it may be explained by the fact that they are of the same age, for A. I. has never grown old—inside.

I think that most of the readers of *Gleanings* on meeting Ernest are somewhat surprised to see, not the immature youth they had pictured to themselves, but a man exceeding his father in physical proportions, with full beard, and a general appearance that leaves you in doubt on which side of 30 to place him. In reality he is only 28 and after a married life of 5 years, he still clings to the idea that his wife was "a special lot," gotten up for his particular happiness.

Mrs. A. I. Root is one of the wholesome, motherly sort, intensely devoted to her home, with an almost painful shrinking from publicity. Along with the strong character that has helped to make her husband what he is, she has that pleasant ladylike manner that enables her to grace, by her presence, any assembly in which she appears. Pity that she is so seldom seen at our conventions!

Of the children, next to Ernest comes Maud, the wife of J. T. Calvert, a rather slender-looking lady, quiet and reserved in manner. Next to her, and somewhat in contrast, comes Constance—"Connie" for short. The older readers of the *Gleanings* will recognize in her, Mr. Root's "Blue Eyes" of former years. Plump in figure, she has an impulsive nature that will never allow her to be a negative character. She is 18, and is at present at school at Oberlin.

Then comes one that I should say might be a 12-year-old—Caddie, or Carrie. She is a very quiet and sweet little Christian woman, to whom, if you do not fall in love with her at first sight, a very slight acquaintance will make you surrender at discretion. If you resist everything else, her singing will charm you.

The youngest is 7 years old, Huber, of whom Mr. Root often speaks, mainly, I suppose, because he is "the baby." Left entirely to himself, Huber would hardly make a saint. He is not an angel—just that healthy, active "animal" that we call a boy—full of a boy's ways, an example of perpetual motion that you like to watch, to see what he will do next. I can hardly imagine him ever becoming just such a character as his elder brother; but the influence of such a mother as he has, is all powerful.

Mr. A. I. Root lives 6 or 8 rods back from the street, in a fine brick residence, too large, I should say, to be left in the hands of any one woman who will persist in taking so much of the care of it that should be delegated to others. Across the street from Mr. Root are 3 fine roomy yards. The middle one is owned and occupied by Mr. H. B. Harrington, who has reared so many queens, and whose wife is a sister of Mrs. A. I. Root. The other 2 houses belong to Ernest and Mr. Calvert. Notwithstanding the youthful look that is given to this latter gentleman by a complexion that any belle might envy, he is brimful of business energy, and is fast becoming, if he has not already become, the chief business-man of the concern.

When I commenced to write I did not intend to go into all this gossip. I intended merely to mention Ernest's visit, and then talk about bees. But I feel sure many will like to know just the things about which I have written.

Marengo, Ill., Nov. 10, 1890.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Handling Bees.—This is the title of a nice pamphlet, containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 7, 8.—Ontario, at St. Catharines, Ont.
W. Couse, Sec., Streetsville, Ont.

Jan. 16, 17.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 22-24.—New York State, at Albany, N. Y.
Geo. H. Knickerbocker, Sec., Pine Plains, N. Y.

Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

◆

North American Bee-Keepers' Aasociation

PRESIDENT—P. H. Elwood. ..Starkville, N. Y.
SECRETARY—C. P. Dadant ......Hamilton, Ills.

◆

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

Good Crop for a poor Season.

I got 1,000 pounds of comb honey from 32 colonies this season. It netted me over $100, as poor as the season was. There was very little white honey secured in this section of the country. There was plenty of white clover bloom, but no honey in it, and but very little basswood. Bees had to search around on anything that yielded any sort of sweets. There was very little swarming. On the whole, the farmers were not the only ones that fared badly; even the industrious little bee had to come in for its share this year. E. W. COUNCILMAN.

Newark Valley, N. Y., Dec. 7, 1890.

◆

Re-Queening an Apiary.

This is my first season with bees. I started in Spring with 3 colonies; increased to 5, and took 150 pounds of comb-honey. It has been a poor season here for bees; there was a plenty of white clover, but there was no honey in it. When is the best time to re-queen an apiary? S. G. KILGORE.

London, O., Dec. 13, 1890.

[When the honey-yield begins to cease, is the best time to introduce alien queens, though it may be done at almost any time, during the Summer, should occasion require it.—ED.]

◆

Spanish-Needle Honey.

The honey crop with us this season was very poor; in fact this part (E. C.) of the state was more or less an entire failure. Prospects in the early part of the season were good, but when the drought came, that ended the honey crop, as well as cutting other crops short. The scarcity of everything is creating a good demand, as well as good prices. For the first time in 6 years we are getting 10 cents per pound for extracted honey in a wholesale way, and there is not much trouble to sell it at that. What honey was secured this season is of very fine quality and is mostly from Spanish-needle. We have never known that honey to granulate so early in the season as the present; scarcely ever does it granulate before February or March. We notice, in *Gleanings*, some talk about Spanish-needles thriving only in marshy places. We are in rolling prairie country, and it is very dry, most of the time. But never have the Spanish needles failed to yield nectar here. We depend on that source for our colonies to fill up, to carry them through the Winter, and they winter well on that kind of honey. When we have rain during the time they bloom, we often fail to get a good flow of nectar; and quite often a cold spell sets in, which cuts us short. We could hardly get along in this locality without the Spanish-needles. JNO. NEBEL & SON.

High Hill, Mo., Dec. 12, 1890.

◆

Not very Encouraging.

My experience in bee-keeping the past season was not very encouraging to a beginner. I commenced with 15 colonies. I caught 4 run-away swarms and now have 33 colonies in the cellar. I obtained from them about 350 pounds of comb honey, of good quality. I also had to feed nearly 150 pounds of sugar. I fed them until each colony had at least 25 pounds of stores. C. P. McKINNON.

Bangor, Iowa, Dec. 15, 1890.

◆

Queenless Bees Building Comb.

I wish to make a few additional remarks concerning query No. 732, on page 661. I know they will build drone comb on worker foundation, every time, during a flow of honey, if the bees are less than 15 days old. Practice and experience will prove that a queenless colony will build drone combs on worker foundation if you place it in the center of the brood nest. But queenless bees when 15 days old rarely, if ever, build any combs at all; yet they will gather honey all the same. Bees less than 15 days old are those that build their combs, and a queenless colony where there is no brood, and over ten days old, if given a comb of eggs cannot rear a perfect queen, for they have lost the art of making royal jelly. Bee-keepers and poets came into the world in the usual way. They are born young, very young. They attain perfection by practical experience and then only through persistent effort and many, many failures. J. W. TEFFT.

Buffalo, N. Y.

◆

Total Failure of Honey Crop.

This has been the nearest to a total failure of the honey crop ever known here. We looked over our bees in October and prepared about 150 colonies, so that we thought they would winter well, but I now think that a great portion will die before Spring. The honey is all sour; we have not had a pound of good honey this season. We have no honey to *eat*, to say nothing about any to sell. T. & E. E. TRACY.

Nashua, Iowa, Dec. 18, 1890.

◆

Apicultural Reading Matter.

Although a subscriber to the AMERICAN BEE JOURNAL and *Gleanings in Bee-Culture*, yet I am not satisfied, but want more. I am pleased to learn that the BEE JOURNAL is to be enlarged during the coming year, and hope that the addition of many new subscribers will more than balance the increased cost, labor and energy expended in this new departure.

Latty, Ohio. GEO. W. COOK.

HONEY AND BEESWAX MARKET.

CHICAGO, Nov. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Nov. 28.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, Dec. 13.—Comb honey in good demand at 15@17c per lb. Extracted, 7@9c. Beeswax, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Dec. 6.—We quote: Fancy 1-lbs., white, 16@17c.; 2-lbs., white, 13@14c. Off grades, 1-lbs., 13@14c.; 2-lbs., 12 cents. Buckwheat, 1-lbs., 12@13c.; 2-lbs., 11 cents. Extracted, white clover and basswood, 8½@9c buckwheat, 6½@7c.; California, 6¾@7¼c.; Southern, 65@70c per gallon. Market has been inactive for weeks. Beeswax, 25@26c.
HILDRETH BROS. & SEGELKEN,
28–30 West Broadway.

KANSAS CITY, MO., Dec. 13.—Comb and extracted honey is not selling as fast as we would like to see it. Market is quiet. We quote 1-lb. white comb at 16@18c; 1-lb. dark, 12@14c; 2-lb. white, 14@15c; 2-lb. dark, 12@13c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 20.—Demand is good for all kinds of honey, with a fair supply of all but Southern honey. Choice comb honey brings 18@20c a lb. in the jobbing way. Extracted honey, 6@8c a lb.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Dec. 12.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, Dec. 20.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 7@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, Dec. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

ALBANY, N. Y., Dec. 6, 1890.—The honey market is quiet, but stock is light and prices well sustained. We are selling white at 16@20c; mixed, 14@15c; buckwheat, 13@14c. Extracted, white, 8½@10c; amber, 7@8c; dark, 6@6¼c. Beeswax, 28@30c.
H. R. WRIGHT, 326-328 Broadway.

◆

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction

◆

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

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